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The purpose of this study was to determine if Michigan schools can conduct an evaluation of their own programs of vocational education, with emphasis on outcomes and attainment of local objectives, maximizing the use of local personnel and resources, and utilizing consultant leadership and related professional assistance. The study was conducted with the cooperation of 10 school systems. Four of these were classified as small size, three as medium, and three as large. The emphasis was on local staff and citizen involvement, curriculum analysis, assessment of outcomes through follow-up, and special activities and projects of interest to each school. The study involved 317 staff members and 45 advisory committees for local problems of vocational education, consisting of a total of 303 citizens. The following elements were established as relevant in a local program self-evaluation: (1) administrative endorsement and support, (2) a local leadership team, (3) a program of local leadership preservice and inservice training, (4) an evaluation program plan, and (5) a staff committee for evaluation. A related document is available as ED 014 548. (CH)

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MICHIGAN STATE UNIVERSITY
RESEARCH & DEVELOPMENT PROGRAM
In Vocational-Technical Education

FINAL REPORT

Project No. 7-0211
Grant No. OEG-3-7-070211-1679

October 1968

A Developmental Vocational Education Research and Teacher Education Program Based on a Clinical School Concept

EVALUATION SYSTEMS FOR LOCAL PROGRAMS OF VOCATIONAL - TECHNICAL EDUCATION

U.S. Department of
Health, Education and Welfare
Office of Education
Bureau of Comprehensive and
Vocational Education Research

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MVK50175

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The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U.S. Department of
Health, Education and Welfare
Office of Education
Bureau of Comprehensive and Vocational Education Research

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I. INTRODUCTORY SECTION

SUMMARY

Relationships to R & D Program

The Research and Development Program in Vocational-Technical Education has been based on the clinical approach involving local school systems as partners in the try-out phases of theoretical constructs for curriculum, administrative patterns, teacher education, instructional material development, and other aspects of vocational-technical education. The Evaluation Systems Project is one of three in the R & D Program concerned with comprehensive local programs of vocational education.

The Evaluation Systems Project has drawn upon the staff resources available from the five vocational teacher education services represented in the R & D Program. Likewise, the findings from this project have been, and will be made available for use or reference by the staff involved in other R & D projects.

The Problem

There has been a growing concern on the part of citizens and school people for evaluation of their school programs of occupational education. In Michigan an evaluation of the state's program of vocational education was completed in 1963. Following this a project was conducted to develop and try out a systematic approach to local program self evaluation. This project, conducted over a period of two years with three school systems, resulted in the identification of procedures that worked satisfactorily, and which suggested some of the important elements of a system for local program self evaluation. It remained to be determined, however, the extent to which other schools of varying size and varying school and community characteristics could follow this system satisfactorily.

The problem which was posed was essentially this: Can Michigan schools conduct an evaluation of their own programs of vocational education, with emphasis on outcomes and attainment of local objectives, maximizing the use of local personnel and resources, and utilizing consultant leadership and related professional assistance?

Scope of the Study

The study was conducted with the cooperation of 10 school systems. Four of these were classed as small in size, three as medium, and three large. Most geographic regions in Michigan were represented. Two staff members were appointed by each school to constitute a leadership team. Most of the work of the project leader involved working with these 20 local leaders and the chief administrators in these systems. The project began in January 1966, and was completed, except for reporting and publication of the revised manual by January 1, 1968. Most of the work of the leadership teams and their committees was done during the academic year 1966-1967.

The emphasis was on local staff and citizen involvement, curriculum analysis, assessment of outcomes through follow-up, and special projects and activities of interest to each school. The 10 schools involved the committee and individual study activity of 317 staff members; and 45 advisory committees for local programs of vocational education, consisting of a total of 303 citizens.

Objectives of the Study

1. To further try-out and demonstrate a system for the evaluation of vocational education on the local level which originated in the Michigan Project on Evaluation of Local Programs of Vocational Education.
2. To discover and/or devise new or improved procedures for local program evaluation.

3. To establish a working environment in which learning of evaluation procedures for both local school personnel and potential leaders at state and national levels of vocational education can take place.
4. To identify and describe the role of the consultant in program evaluation.
5. To uncover situations that could be considered as potential research and development centers.

Methods Used

The following are the principal methods used in conducting the study.

1. Utilize consultant and advisory services of the R & D staff and consultants in the MDE in selecting schools, conducting local leadership training, developing instruments, and in other appropriate ways.
2. Conduct workshops and conferences to prepare local leadership teams for their role, to provide for sharing of experiences and reporting progress, and for informal evaluation of the developing system for evaluation.
3. Make school visits, as necessary, for orientation of administrators and project leadership teams, for consultation services to these schools, for monitoring each local project, and for obtaining information relevant to the development of the evaluation system.
4. Appoint and utilize experienced vocational teachers as research assistants to provide consultant services to the schools, to assist the cheif investigator, and to conduct special studies related to local program evaluation.
5. Utilize the information and experiences gained in the project to revise the manual on evaluation.
6. Analyze the records and other data from cooperating schools to further develop and/or revise a generalized system, and to determine the attainment of the objectives of the study.

Results Obtained

An orientation meeting was held for school administrators and prospective leadership teams from 12 interested school systems. A three-day workshop was conducted for members of leadership teams from the ten cooperating school systems. Three project report meetings were held, with all 10 schools participating. A final conference was held with emphasis on recommendations and implementation. Several kinds of materials relating to local program evaluation were provided the schools. All schools received local administrative approval before starting.

The project leader held 54 conferences with individual school leadership teams, nearly all of these being held in the local schools. The research assistants conducted 24 consultative visits to local leadership teams.

All leadership teams prepared local project plans, most of which contained objectives of the project, and all listed the activities to be conducted. Four of the schools prepared a schedule of activities. All schools formed an evaluation committeee of staff, either as a steering committee or a working committee.

The project leader maintained a log of activities, as did also the local project leaders. Records were maintained in each school. Reports of local projects were prepared and submitted by nine of the schools.

Highlights of Findings, Significance, and Implications

The objectives of the project were satisfactorily attained as follows:

1. The evaluation system was tried out in all ten cooperating schools, and was demonstrated successfully in nearly all of these schools. As a result, the following elements were established as relevant in a local program self evaluation (a) administrative endorsement and support; (b) a local leadership team; (c) a program of local leadership pre-service and in-service training; (d) an evaluation project plan; (e) a staff committee for the evaluation;

(f) staff time for evaluation; (g) objectives and curricular analysis; (h) advisory committees for assistance in the evaluation; (i) follow-up study of former students; use of consultant help and instructional materials in development and use of evaluation instruments; and (j) adequate reporting of activities.

2. New and/or improved procedures for local program evaluation were developed. These relate to follow-up studies, advisory committees, curricular study, and procedures of involvement. These are incorporated in the revised manual on evaluation.
3. The project provided the working environment for leadership development of 20 local school persons and for four graduate research assistants. The assistants' activities included conducting conferences for local leaders, planning and/or conducting research studies, and consultation regarding local studies.
4. The role of the consultant in program evaluation was studied and partially described. Further work is needed on this.
5. Situations were identified that could be considered as potential research and development centers.

There was substantial evidence that local school personnel assigned to the project made considerable professional growth.

Strengths in the system were identified as: (a) emphasis on objectives and evaluation in terms of outcomes; (b) involvement of staff and citizens contributing to implementation of recommendations growing out of the studies; (c) identification of need for and use of consultant services; (d) development of understandings about and support for vocational education in the local community; and (e) the many techniques in and related to local program evaluation resulting from the clinical approach. The project leader was not successful in getting local leadership teams to go very far in the identification of student behavioral goals in the various vocational education programs in cooperating schools, and in taking the logical steps to measure the attainment of the behavioral goals. Another shortcoming was the relatively small local emphasis given to evaluation of adult and post-high school vocational education.

The success of this project leads to two specific recommendations in regard to the system. The first is that steps be taken to provide state level leadership and support to other school systems in the state of Michigan so that the system may be used and improved by many school systems desirous of improving their programs of occupational education through self-evaluation studies.

The second recommendation is that the system be tried out and demonstrated in other states. This would help to establish its generalizability to similar states and school districts, as well as to states having different organizational patterns such as county unit systems of school administration. It would be desirable to determine the applicability of the system to evaluation of area vocational schools and centers and to community college programs of vocational and technical education. It may also be possible and would be desirable to try out the system with state project leadership based in a state department of education, a research coordinating unit, or other entity.

INTRODUCTION

Relationship to R & D Program

The Research and Development Program in Vocational-Technical Education has been based on the clinical approach to teacher education and program experimentation. Local school systems have been involved as partners in the testing and try-out phases of theoretical constructs for curriculum, administrative patterns, teacher education, instructional materials development and other aspects of vocational-technical education.

Administration of R and D operations is the responsibility of faculty and staff in the Department of Secondary Education and Curriculum under U.S.O.E. Contract OE 5-85-111, and with support from Michigan State University and the Michigan Department of Education.

The Evaluation Systems Project has been one of three projects in the R & D Program that cut across the several occupational fields in local vocational education programs. The two other projects have been (1) The Shared-Time (Dual Enrollment) Concept for Implementing Area Vocational Education Programs and (2) The Rural School Project.

The Evaluation Systems Project has drawn upon the staff resources available from the five vocational teacher education services represented in the R & D Program, particularly those involved in the Hospitality Education, Distributive Education, and National Office Block Projects. Likewise, the findings from the Evaluation Systems Project have been, and will be made available for use or reference by the staff involved in other R & D Projects.

Overview

This report has presented first a brief summary of the Evaluation Systems Project. The present section gives the background of the study, and its objectives, design, scope, and limits. In the following section the methods of conducting the study are given. The central section presents the findings and their analysis, organized mostly on the basis of activities conducted in local schools. The presentation is necessarily of a narrative and descriptive nature rather than statistical. The conclusions, recommendations, and implications which follow this are organized and stated in such a way as to be of practical value to those who may seek to organize and conduct local program evaluations elsewhere.

Background

The background for this project is strongly dominated by a national concern with evaluation of vocational and technical education. The questions of availability; of service to all age groups and levels of education and to all people of varying ability, background and interests; and of breadth of offering to meet demand for trained workers in a rapidly changing occupational complex and unemployment or underemployment; all have called for study. These have also become the concern of people in local communities and in the state, in view of increasing dollar investments in education.

In Michigan these concerns provided the stimulus for a state-wide evaluation of vocational education.[1] Examples of subsequent efforts in other states to either conduct evaluations or to study the process are those of Kaufman[2], Lee[3], Eninger[4], Smith[5], the centers at North Carolina

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[1] Vocational Education in Michigan (East Lansing: Michigan State University, 1963). 252pp.

[2] Jacob J. Kaufman, "The Role of Cost-Benefit Analysis in the Evaluation of Vocational and Technical Education," (University Park: The Pennsylvania State University, 1967).

[3] Allen Lee, Format and Criteria for Self-Analysis of State Agencies for Vocational-Technical Education (Berkeley: University of California, 1967).

[4] Max U. Eninger, The Process and Product of T & I High School Level Vocational Education in the United States -- The Product (Pittsburgh, Pennsylvania: American Institutes for Research, 1965) 433pp.

[5] Harold T. Smith, Education and Training for the World of Work (Kalamazoo: The W. E. Upjohn Institute for Employment Research, 1963).

State University and at The Ohio State University, and the National Assessment Project. Following the Michigan study, the first project to develop and try out a systematic approach to local program self evaluation was conducted.[6] Three Michigan schools, Gaylord, Marshall, and Warren-Fitzgerald participated in the original evaluation project. The findings of this study were the basis for a recommendation that the project be extended to other schools in Michigan, and that the generalizability of the system in other states be determined.

The project herewith reported has utilized the findings of the previous project, and has been based to some extent on its design. It has sought to maximize the use of local personnel, local resources, consultant leadership, and related professional assistance. The ultimate aim or purpose, of course, is improvement of vocational and technical education. The premise is that sound program evaluation is necessary for bringing about improvements in program offerings and operations. To the extent that changes in programs are contingent on decisions by local citizens and educators, relevant evaluations of the existing programs are essential.

Several assumptions were made prior to the design and beginning of the Evaluation Systems Project. These are as follows:

--The improvement of a local program of vocational education should be based on an evaluation of the program.

--School officials and citizens want to evaluate their programs, want help in this endeavor, and desire education in evaluation principles and procedures.

--Evaluations of local programs should be the concern of those affected by them and of those involved in the programs.

--Educators and citizens are primarily concerned with outcomes of programs, when making evaluations, but with concern for the ways and means largely in relation to the evaluation of these outcomes.

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[6] Evaluating Vocational Education in the Public Schools, Educational Research Series, Number 32, (East Lansing: Michigan State University Bureau of Educational Research Services, October 1965). 57pp.

--There is a need for education of prospective state leaders in vocational education in the principles and procedures of local school program self evaluation.

Objectives

The objectives of the project were drawn within the framework of these assumptions, and patterned somewhat after the antecedent evaluation project already referred to. Specifically they are as follows:

1. To further try-out and demonstrate a system for the evaluation of vocational education on the local level which originated in the Michigan Project on Evaluation of Local Programs of Vocational Education.
2. To discover and/or devise new or improved procedures for local program evaluation.
3. To establish a working environment in which learning of evaluation procedures for both local school personnel and potential leaders at state and national levels of vocational education can take place.
4. To identify and describe the role of the consultant in program evaluation.
5. To uncover situations that could be considered as potential research and development centers.

This project was designed in such a way as to maximize the values of local school staff and citizen involvement, to place emphasis on goals and outcomes, and to encourage the development and implementation of a system for evaluation on a permanent or continuing basis. The broad steps are indicated, but there is provision for flexibility to supplement and modify these steps and the general procedures so as to adapt them to different sizes and types of local schools.

Design

The following steps constitute the general design of the project.

1. Utilize the R & D staff and Michigan Department of Education consultants in an advisory capacity on the project.
2. Select 10 schools to participate in the project. Have a leader of the local evaluation project appointed in each of these schools. Provide partial support for one research associate for released time in each school. These two persons were to work as a team.
3. Hold meetings in individual schools and a meeting of representatives from all prospective participating schools to:
   a. Discuss objectives of the project
   b. Plan for subsequent steps in getting the project underway
   c. Begin identification of areas of concern in local school situations and of possible activities for local evaluation projects.
4. Conduct a workshop for all local teams from schools cooperating in the project. Utilize the Manual on Evaluation of Local Programs.[7] Employ short-time consultant help for the workshop.
5. Hold conferences in each school as follow-up of the workshop to help: in setting local project objectives; in developing broad outlines and/or steps in each local project; and in planning for the organization of local school staff and resources for evaluation.
6. Encourage each cooperating school to conduct workshops and/or staff conferences for preparing local staff for evaluation of vocational education programs and for planning activities in the project.
7. Appoint experienced vocational teachers as research assistants to serve in a consultant capacity to these cooperating schools and

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[7] Harold M. Byram, Evaluation of Local Vocational Education Programs (East Lansing: Michigan State University, 1965). 81pp.

to assist the state project leader in related activities. Provide intern experiences for these assistants through the project.

8. Utilize services of specialized consultants from the Michigan Department of Education as needed, and to correlate with evaluation of the state program of vocational education.
9. Hold three progress report meetings of local evaluation project teams.
10. Assemble reports and other data from cooperating schools to determine the extent to which practices have been adopted, and with what success, as well as to identify new or improved practices.
11. Analyze records and other data from cooperating schools, and conduct depth interviews to further develop and/or evaluate a generalized procedure or system.
12. Construct the role of consultant on evaluation through a perception study, and through analysis of records kept on the evaluation project and reports from the schools.
13. Hold final meeting of project teams and local administrators, with emphasis on implementation.
14. Utilize information and experiences gained in the project to revise the manual on evaluation.
15. Prepare periodic reports and a final report on the project.

Scope and Duration of the Project

The memorandum of agreement with each cooperating school covered the fiscal year 1966-67. However, the final report meeting was held in October, 1967 and the schools were allowed until the end of 1967 to submit their reports on the project. Since the work began on the project in January, 1966, the time span was two calendar years plus six months for preparing and publishing the revised manual and the final report on the project. Although the scope covered the 10 schools, some resources were shared with an additional school that had requested help in a local evaluation. The personnel chiefly involved were the 20 project team members and the R & D project staff.

METHODS

The Advisory Groups

Two advisory groups were utilized in the initiatory stages of the project. One consisted of members of the vocational teacher education staff of MSU. They contributed advice on the design of the project and on the selection of schools. The state director of vocational education and his assistant also were consulted. The director appointed a staff member from each of the vocational education fields and one from the Michigan Research Coordinating Unit to serve as consultants. Two meetings were held, with these consultants serving as an advisory committee: one at the beginning of the project, and one near the end of the academic year 1966-67. They were invited to attend all meetings called for local leadership teams. They made themselves available to the schools as consultants.

Selection of Schools

In the selection of schools, the position was taken that all schools in Michigan should be considered. Thus, all schools were notified of the availability of the manual on evaluation previously referred to. Requests for the manual came from about 250 schools. The five criteria used to select the schools from this group were:

- --Have expressed a desire to evaluate its program with a view to improving it where necessary. The criterion was met if the school requested the manual of evaluation of local programs.
- --Have not less than 1500, nor more than 20,000 enrolled in kindergarten through 12 grade.
- --Have vocational education programs under way in at least three reimbursable fields.
- --Come from a location such as to contribute to geographical representativeness of the group of schools as a whole.

--Have administrators and faculty willing to cooperate in the project by assigning a staff member as local project director or leader, and by providing him working time and local travel to direct the project.

The size classification was made so as to have a somewhat comparable number in each class from which to select. These were small, 1500 to 2,900 K-12; medium 3000 - 10,000 K-12; and large, 10,000 - 20,000 K-12. One school larger than this was included because it had already been selected as an R & D clinical school site, and because of its close proximity. On the basis of the criteria, letters of invitation to participate were sent to 25 schools. Of these, 16 responded favorably. Eleven schools were visited to provide the administrators further information. Invitations were sent to 14 schools to attend an orientation meeting on March 21, 1966. Twelve of these sent representatives, and of these, 10 schools decided to become a part of the project. These included three large schools, three medium schools and four small schools as shown in Table I:

Table I

Size of Participating Schools in 1966

Size Classification	K-12 Enrollment	Name of School
Large	32,109	Lansing
	16,755	Waterford Township
	11,900	Benton Harbor
Medium	8,340	Alpena
	6,510	Niles
	4,700	Sault Ste. Marie
Small	2,675	Hillsdale
	2,600	Fremont
	2,460	Corunna
	2,043	Big Rapids

Each of these ten schools had reimbursable vocational education programs underway in at least three fields. A diversified cooperative education program was treated as a field, since it denoted one or more fields in addition to those separately reimbursable. Business education is treated here as a field, including either or both office education and distributive education. Two of the 10 schools had programs in five fields, as shown in Table 2. The schools are scattered throughout the lower peninsula of Michigan, and one school is located in the eastern part of the northern peninsula as shown in figure 1.

Table II

Vocational Education Programs in Ten Participating Schools

School	Agricultural Education	Business Education	Home Economics	Industrial Education	Cooperative Education
Alpena	X	X	X	X	X
Benton Harbor	X	X	X	X	X
Big Rapids	X		X		X
Corunna	X	X	X		X
Fremont	X		X		X
Hillsdale	X		X	X	X
Lansing		X	X	X	X
Niles	X	X	X		X
Sault Ste. Marie	X		X	X	X
Waterford Twp.		X	X		X

Leadership Development Activities

The activities of the project leader in the development of evaluation capability of local leadership teams were of five kinds: orientation to the project; workshop for leadership teams; periodic conferences or report meetings; development and dissemination of materials relating to evaluation; and consultant services. The orientation meeting was held for administrators and local leadership teams. It dealt with the following subjects: relation to the R & D program, purposes of the project, getting local projects under way, brief reports on each school situation represented, and planning for future activities.

A workshop of three and one-half days was held for the local project

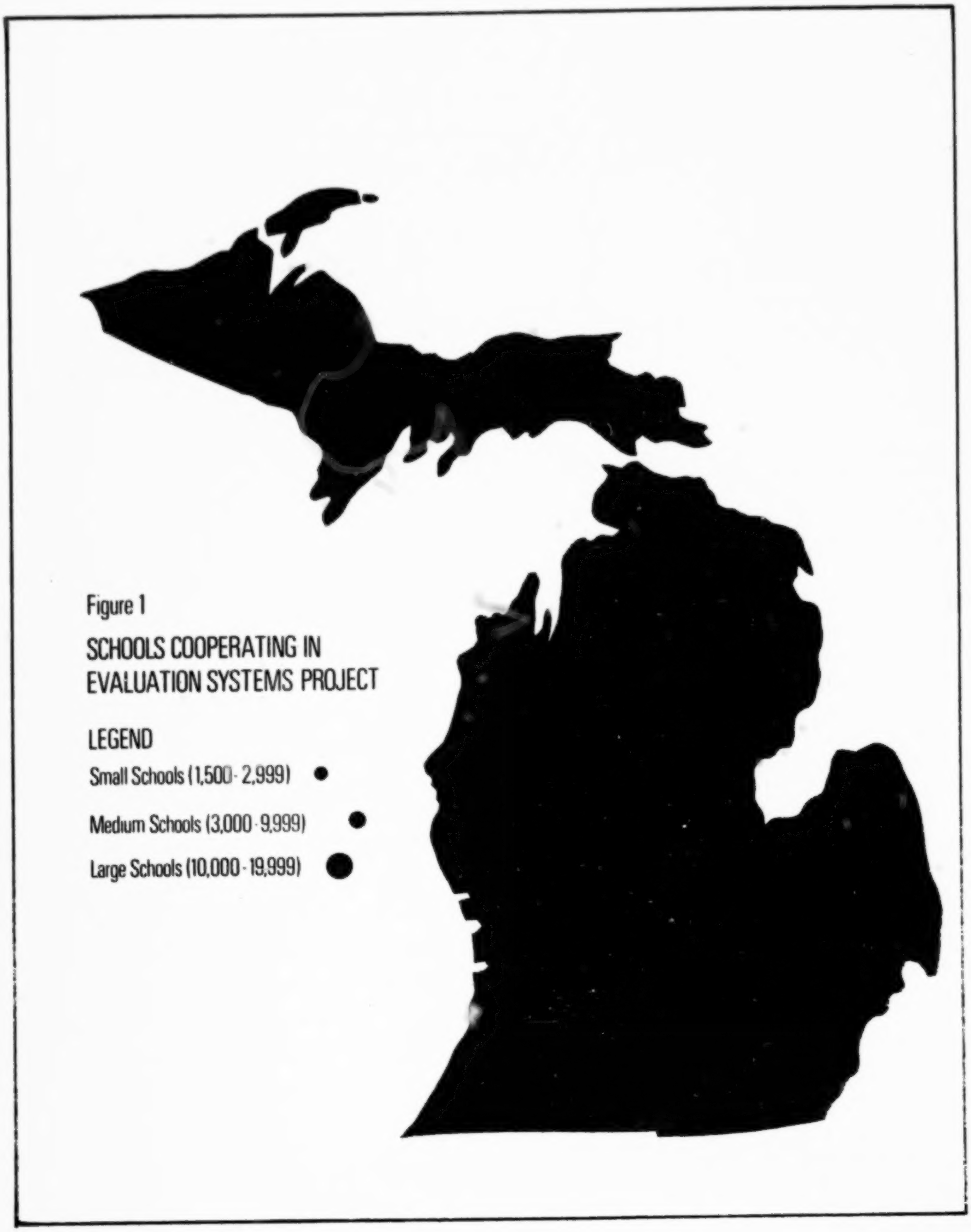

Figure 1

SCHOOLS COOPERATING IN EVALUATION SYSTEMS PROJECT

LEGEND
Small Schools (1,500 - 2,999) ●
Medium Schools (3,000 - 9,999) ●
Large Schools (10,000 - 19,999) ●

leaders and the research associates from each of the ten schools. Program participants included three persons from schools involved in the previous evaluation project; two staff members from the Michigan Department of Education, and 11 faculty members of Michigan State University. Attendance included 18 from the participating schools and three consultants from the Michigan Department of Education. Following the workshop memoranda of agreement with each school were drawn up and signed by the cooperating schools. (See Appendix A)

The first report meeting was held on October 27 at MSU. Attendance included 17 persons from the 10 schools, two M.D.E. consultants and a representative of an associated school. The purposes of the meeting were

A Progress Report Meeting of the Evaluation Systems Project, held at MSU, October 27, 1966, was attended by (from left to right): Langsford Collins, Sault Ste. Marie; Dr. George Kohrman, Western Michigan University, consultant; John Ehresman, Alpena; William Davis, Niles; Richard Clark and Gerald Butts, Corunna; Edward Remick, Lansing; Dale Messerschmidt, assistant, MSU; Earl Miller, consultant, MDE; Arthur Nelson and Arnold Mokma, Big Rapids; Harold Byram, MSU project leader; Floyd McKinney and Joan Quilling, assistants, MSU; Walter Martinen and Arvid Erholtz, Hillsdale; T. H. Kerrey, consultant, MDE; Warren Suchovsky, Stephenson; Neal Blinkman and Donald Pobuda, Benton Harbor; Larry Wagner and Burton Thorn, Waterford Township; and Fay Adair and Alvin Griffin, Fremont.

The second meeting was held January 20, 1967. This was a short meeting scheduled in connection with a gathering of administrators and teams from all schools involved in any R & D projects. It was announced that R & D support to local schools was unavailable for the last half of the academic year due to cut in Federal funds. Nevertheless, all schools in the project decided to continue without the support. A brief report of progress was made by the project leader. Plans were made for future meetings. An inventory of information that local leaders might include in project reports was presented and discussed. All schools were represented by 15 local leaders.

An all-day meeting held on March 14 was attended by 17 persons from the 10 schools, an associated school, and three MDE consultants. The feature of this meeting was three group meetings according to size of schools, chaired by three research assistants. These groups later reported to the conference. Recent developments in the state project were reported, plans for completing of the project were discussed, and plans were made for year-end, depth interviews, and for the October implementation conference.

The sixth and final meeting of the project leadership teams was held on October 26, 1967. Twenty representatives from 10 schools, including two superintendents, representatives from three interested schools, 21

Dr. Gordon McCloskey, noted specialist in educational communications, Washington State University, addresses a joint luncheon of local leadership teams in the Evaluation Systems Project and state and local leaders in the Office Block Project. The subject of the discussion is "The Implementation Process."

staff members from MSU, and five MDE consultants attended, for a total of 37. Reports by the project leader and "capsule" presentations by each school were featured. The conference divided into groups to discuss implementation with leaders of four other R & D projects in vocational-technical education. Problems of implementation were also discussed in the general meeting. The luncheon program featured an address by Dr. Gordon McCloskey on "The Implementation Process."

Materials developed and made available to leaders at sometime during the two years included the Manual Evaluation of Local Vocational Education Programs; papers presented by speakers at the workshop and the final meeting; the report of the previous evaluation project; a brochure describing the project; suggestions on interviewing; suggestions on preparing the final report on the project; a guide for evaluating work with citizens' advisory committees; and an instrument for measuring understandings about vocational education.

One of the major local leadership development activities was consultant services to the 10 cooperating schools. Limited consultant service also was extended to another small school at its request. The project leader provided much of this consultant service. The 10 schools received 54 visits by him, with a range per school from three to 12. The number of these conferences varied somewhat indirectly with the distance from East Lansing. These visits were made to orient local leaders, to monitor the project, and/or to provide consultant service on problems and concerns. They included participation in four local staff and/or advisory committee meetings. The length of these monitor-consultant visits varied, but averaged about two hours. Thus, roughly 55 man-days were spent in this type of service, exclusive of time spent in reporting visits and preparing for them. A report of each visit or conference was prepared, with a copy going to each leadership team.

The consultant services provided through research assistants were designated by field. More of the requests for their services, however, were not related to a particular field, but to research procedures and/or data processing. Seven were of this nature out of 24 requests. The others dealt, in order, with industrial education, business and distributive education, miscellaneous, agriculture, and home economics. While no effort was made to determine the extent of State Department consultant services to these schools, six such cases were reported, all relating to a vocational education field. MSU staff other than project staff, served in a consultant capacity on a number of occasions, and made a total of eight addresses at meetings other than the workshop, previously reported here.

Records, Reports and Interviews

Records kept included a log of activities kept by the project leader; materials submitted by the cooperating school; reports of visits/conferences with schools; correspondence with them and monthly reports to the R & D Program Director. Each school was asked to prepare and submit a final report on its project. Nine such reports were received. Each leadership team kept a record of surveys or other research activities, and results and reports of investigations. Each local leadership team kept a log of its own activities.

The structure of depth interviews conducted at the end of the academic year was developed by the project leader, with the help of the research assistants and the MDE consultants assigned to the project. The interview forms were tried out in one school before start of these interviews. The interview forms are given in Appendix B.

Public/professional relations on the project were designed to inform the local schools and committees, the education profession, and the general public. Presentations in regard to the project were made to a state RCU conference, to a RCU-R & D joint meeting, to a MSU Department of Secondary Education and Curriculum meeting, to a U.S.O.E. Vocational Division meeting, five times to a University of Michigan Seminar for prospective administrative leaders, once to a conference of R & D Hospitality Education Project participants, and six times to MSU graduate classes in vocational education. A brochure was produced and received wide dissemination. Two newspaper releases were widely published. Each participating school conducted local publicity regarding the project.

Two special studies were planned and conducted by research assistants assigned to the project. One related to the role of the consultant on vocational education evaluation. This is referred to in Objective No. 4 of the project. The other was the development and preliminary tryout of an instrument designed to measure understandings about vocational education in the public schools. (See Appendices E and F for complete reports of these studies)

II. FINDINGS and ANALYSIS

This section is mainly a presentation of plans made and activities conducted by local project leaders, the faculty in their schools, and the citizens in their communities. The focus is on the year 1966-67, although many of the outcomes of the projects would not develop or be identifiable until later.

LOCAL PLANS FOR EVALUATION

All leadership teams prepared plans for conducting their evaluation projects, but there was little uniformity in the contents or format of these. Five prepared statements of objectives for the project. Two presented a statement of overall, or general purpose. Three did not give the purpose or objectives in the written plan. There had been no requirement placed on these schools in this regard, but it had been suggested at the start of the project by the state project leader that objectives could well be included in the plan. There was evidence that in some cases the local leadership team wanted the staff evaluation committee to formulate its own objectives.

Diversity among the local project plans also showed up in the listing of proposed activities. Two of the large schools included a long list -- in one case of 17 activities and in another case of 14 -- for the committees and staff to consider and/or carry out. The other large school presented: (1) an outline for each departmental self-evaluation; (2) the plan for the evaluation committee; and (3) the plan for advisory committee use. One of the medium schools listed specific activities in its plan, but the other two did not. Among the small schools, one listed specific activities, one suggested areas of activity, one presented the plan for staff involvement and things to be studied, and one mentioned one activity which was to be its main endeavor.

Four of the schools included a complete schedule in their plans, and two presented partial schedules. As with the question of objectives and activities, several leadership teams preferred to encourage the development of these through staff and/or community involvement.

Most schools did not include a plan for use of consultants. The three that did so appeared to mention it as a reminder to themselves or to the educators with whom they worked locally.

The administrative relations to the local projects varied, as would be expected, with size of school and nature of staff and administrative organization. These will be reported by school size, starting with the large schools.

One of these organized a "central committee" that included the assistant superintendent and the high school principal. Another one had a "Vocational Education Study Committee Organization" composed of administrators from each of the junior and senior high schools. This committee met with the vocational and practical arts teachers and the assistant principal in each of the two high schools, and some junior high school teachers at the end of the preceding school year. The third large school had an administrative committee consisting of the superintendent, his deputy superintendent, the supervisor of instruction, the director of secondary education, and the principals and assistant principals of the three senior high schools. The leadership team met weekly on the project and monthly with the state project leader.

The three medium schools varied in their administrative relations. In one the superintendent assigned the responsibility for leadership in the project to the team and gave very little attention or supervision to it. In another school the superintendent appointed the leadership team and called a meeting to start off the local evaluation committee. Included in this, in addition to teachers, were the high school principal and assistant principal and the junior high school principal. The superintendent in the third school recommended appointment of the leadership team. The assistant principal of the high school and the director of guidance was placed on the steering committee for the project. The superintendent kept in constant touch with the leadership team in this school. It had the greatest amount of citizen involvement of all ten schools.

In the four small schools, all projects were inaugurated by the superintendents. In one of these the assistant superintendent was designated as a project leader. In another this position was represented on the evaluation committee. In a third school no plan for communication through the high school principal was set up. This apparent oversight was later referred to by the superintendent as a weakness in the project. In this school a meeting was held before the end of the previous school year to launch the project. In the fourth school there was a change in the superintendency between the time of decision to cooperate in the project and the launching of the local project. This change may have adversely affected the momentum generated at the outset.

LOCAL STAFF INVOLVEMENT IN THE PROJECT

Numbers and Proportion

The presentation and analysis of information about staff involvement focuses first on the scope, or extent of involvement. The ten cooperating schools reported a total of 297 staff members involved, in addition to the 20 leaders, or a grand total of 317 local educators. In terms of the number in each school, there was considerable variation. The three large schools involved 20, 47, and 90, for a total of 157. The three medium schools involved 13, 30, and 49, for a total of 92. The four small schools had 6, 11, 15, and 16, for a total of 48.

Analysis of fields of staff positions showed that most were vocational and/or practical arts teachers. The largest number, 84, were in office and/or distributive education, followed by 75 in industrial education. These would include industrial arts teachers in the smaller schools as well as in some of the larger schools, and health occupations teachers. Both these groups also included coordinators of cooperative occupational education. Home economics teachers numbered 19 from nine schools, and agriculture teachers eight, one for each of the schools offering such programs.

Seven schools reported the involvement of 17 members of guidance staffs, in addition to the three schools in which the research associate was drawn from the guidance staff. Two large systems did not involve these persons. The non-involvement of home economics staff members also was in one large system. This may be a reflection of the local definition of what is included in vocational education and/or the jurisdictional lines drawn in regard to the local director of vocational education serving as project leader.

Other than the faculty groups separately identified here, there was a total of 81 persons. This additional involvement ranged from one to 25, but this number seemed unrelated to size of total staff involvement.

These persons included administrators and/or their assistants, and academic teachers. Two teachers or administrators of adult education were included. The project leader who conducted a credit workshop involved 30 through this medium, in addition to 17 others.

The generally prevalent, non-involvement of persons identified with adult education can be ascribed to several factors. Generally, the adult teachers were not full time in this assignment. Some schools administered adult programs through the local community college, again the jurisdictional lines showing up. The result, however generally speaking, was the restriction or concentration of evaluation in most schools to the secondary level.

Extent and Nature of Involvement

The number of meetings held by local leadership teams might give some indication of the extent of involvement. However, not all schools reported this information. The five that did, showed a range from one to seven, for a total of 15, and average attendance ranging from 4 to 13. But in addition, these and other schools involved staff members in citizen advisory committee meetings, which are reported in another section. It should be noted also that all project leaders worked directly with individual teachers, small teacher sub-committees and in other informal ways. The project leader in one school who conducted a credit workshop held eight three-hour meetings of this group.

Factors enhancing involvement were identified as competence of the leader in group processes, administrative endorsement and encouragement to faculty members, and arrangements for time to work on the evaluation. Inhibiting factors differed by schools. In one school the high school principalship was vacant during the year and was a controversial community subject. In one school the research associate who had been prepared to function sought and obtained another assignment, and the staff member replacing him had to learn his role. In another school a new superintendent was in charge and "feeling his way", while in still another school the superintendent left for a new position before the project year ended.

In three schools the project leader was not in an administrative or supervisory position, which might not have been a handicap, but was reported as such by these leaders, particularly as related to the enlistment of staff cooperation and to implementation of recommendations.

There were some differences with respect to the start of staff involvement. Two small schools started in May. One large school started preliminary steering committee work in June. All the others started just prior to, at, or soon after the opening of the school year.

Methods Used

The form of involvement most common was the organizing of a staff steering committee, or committee of vocational department heads. This was the pattern in two large, three small, and one medium school. The forming of an evaluation staff and/or the grouping of all the vocational and practical arts teachers was followed in two medium and one small school. An administrative announcement and individual contacts were used in the remaining school.

General Outcomes

The outcomes from staff involvement in the cooperating schools could not be isolated or identified separately from the outcomes of the project as a whole. In the year-end interviews the leaders and their associates were asked about the sufficiency of involvement. Those from seven schools reported sufficient involvement and three insufficient. Of eight administrators interviewed, five reported adequate communications from those involved and two inadequate. One said the oral communications were better than written ones. Leaders from eight schools volunteered the belief or perception that the philosophy of vocational education held by staff members had changed. One leader early in the project reported that the first meeting was one which, to his knowledge, was the first time that all the vocational teachers had ever met together as a group and talked with one another!

The final report by one of the large schools gives additional insight into factors enhancing involvement in that school.

> "Involvement of faculty members, counselors, and administrative staff was the single most difficult item to obtain in evaluating the vocational education program. Because these people were concerned with and involved with multiple daily procedural details, they were reluctant to assume additional responsibilities. They would, however, accept additional tasks when these were of some personal interest."
>
> "One successful approach to having certain evaluative activities performed was to engage those faculty members, counselors, administrators, or others who were enrolled in graduate programs. Frequently these persons would complete the project in conjunction with a course. Advantages of these techniques were:
>
> 1. The project had a deadline date for completion.
> 2. Tighter controls were placed on data sources and data gathering.
> 3. Reference materials were checked for comparisons of response.
> 4. Classmates sometimes showed interest and provided suggestions and encouragement."
>
> "Practices found to be unsuccessful in gaining participation included:
>
> 1. Assigning a staff member a specific problem to be completed.
> 2. Calling general staff meetings to request participation."

CITIZEN INVOLVEMENT

Advisory Committees, Members, Size

The involvement of local citizens in evaluation will be recalled as an important part of the project design and the local schools participation in the Evaluation Systems Project. Six of the 10 schools associated with the project used citizens' vocational advisory committees as part of their evaluation effort. These six schools represented the three size classifications of the schools in the project. Two of the schools were large, one medium, and three small, according to the size classification adopted for the project.

The six schools involved a total of 45 different advisory committees. The smaller schools tended to have committees organized by the following fields: home economics, agriculture, business and distributive education, woodworking, and industrial education. Usually the larger the school the more extensive the vocational offering, and therefore the larger the number of citizen committees. Other committees used in the larger schools included: auto-mechanics, electronics (electricity), body shop, residential drafting, machine drafting, drafting, printing, graphics, machine shop, metals, engine repair, job advisory, health occupations, food service, air conditioning, building trades, trade and industry, business and distributive.

These 45 committees involved a total of 303 citizens, for an average of 50.5 citizens per school and an average of 6.7 members per committee. The citizens' committees in five schools were established as a result of the involvement of these schools in the Evaluation Systems Project. One of the schools had at one time established and used citizens' committees. There was considerable variation in the number of meetings held by the committees. In some schools the committees had normally met once a year, while in others the average had been four to five meetings per year. Newly established committees tended to meet more frequently.

Nature of Involvement

One or more of the schools reported each of the following methods as having proved successful in the operation of their advisory committees.

--Vocational departments nominated citizens for committees.

--Meetings held at the convenience of non-educators.

--Informal meetings were more effective than formal meetings.

--Use of publicity to inform the community of what is happening.

--Selection of committee chairman usually a committee decision. (In some schools a faculty member served as chairman in all cases, while in at least one school a faculty member was chairman only if there was lack of leadership on the part of the citizen members of the committee.)

--Committee membership including representatives of organized groups, employers, supervisory personnel, and influential citizens.

--Use of personal contacts, visits, and phone calls to secure citizen participation in the committee activities.

--Committee members kept well informed on the school's program.

--Meetings held at night with agenda prepared in advance by the committee chairman in cooperation with school liaison personnel.

--Refreshments served at committee meetings, courtesy of the school.

It can be noted that a practice effective in one school may prove to be ineffective or less effective in another. Not all of the methods just listed were found to have been successful in a single school. It was necessary for each school to adapt procedures to its own individual needs and problems. In some schools the committees operated as craft or vocational field committees, while in others there were field or departmental committees which were brought together as a general vocational citizens' advisory committee.

The amount of leadership provided by the local project leader and research associate varied greatly among the schools. In one school in which the citizen involvement was very successful, in terms of meetings held and citizen attendance and involvement, the project leader and/or research associate attended every committee meeting. Citizen members of the committee were contacted by phone prior to the meeting by the project leader's secretary.

Involvement of the citizens included the following types of reported activities.

--Familiarized members with present facilities and program offerings.
--Assisted in the preparation of follow-up questionnaire forms.
--Reviewed and discussed findings of follow-up studies and staff visits to places of employment.
--Formulated recommendations.
--Developed new ideas (brainstorming sessions).
--Discussed and made recommendations relative to course and program objectives and new courses.
--Made specific suggestions in regard to activities in a building trades class.

Unreported activities probably included discussion of objectives of programs. Evidence of this is that generally, the schools using advisory committees reported an increase in the interest on the part of citizens in the vocational programs. Committee members were also reported as being helpful in informing school personnel about the training needs of the community.

FOLLOW-UP STUDIES AND INTERVIEWS

Kind and Number Conducted

The staff evaluation committee in each school considered the making of follow-up studies when planning activities appropriate to attain the objectives of its project. Three small schools, one medium school, and one large school, conducted follow-up of all graduates of a given year. Two medium schools and one large school had recently conducted general follow-up surveys, and the committees in these decided to devote time and energy to other activities. One large school had previously had a number of such surveys made, but also conducted several special studies that will be referred to later. One small school followed up its former students of agriculture.

Survey of All Former Students

In several respects, the most successful survey was one conducted by a small school. The graduates of 1961 and 1965, numbering 212, returned 167, or 79 percent of the questionnaires sent them. These were coded and processed at the MSU computer center. All recommended practices regarding procedures were followed by the staff committee. All committee members participated in the development of the instrument and in the interpretation of the results. One finding came as a surprise to most people involved, namely a much higher proportion of former students having taken employment within a 35 mile radius and remaining in it. This has led to a more detailed study of businesses and industries in the immediate area, and a strengthening of the vocational guidance program in this school. Plans were started to make the follow-up a continuing one, and an integral part of a placement service subsequently to be organized. Curricula are bing re-studied in the light of the findings and some programs are being expanded.

A staff committee of a medium school conducted a follow-up survey of the 1966 graduating class of 401 alumni. Information was obtained on all former students in this category. In addition to a mail questionnaire from 175 former students, 200 telephone calls were made to secure information. This was supplemented by newspaper clippings, grade reports from colleges, and information from in-school students and teachers. While some questions were asked of all graduates, a different form was developed and used in each vocational field or department. This was sent to former students under a cover letter written by a vocational teacher. Curricular suggestions, and a basis for a continuing follow-up system and placement service were reported as outcomes by the committee. A part of the latter came out of another survey conducted by counselors of the intentions of the 1967 graduating class.

One of the small schools studied the graduates and other former students who were one, two, and five years out of high school. Separate objectives were listed for each year's probe. Again, the staff committee participated in development of the survey instrument. All other procedures were followed as those in the school just reported. However, returns were received from only 55 percent of the 505 graduates and 40 other former students. The two later graduating classes returned 61.6 and 64.1 percent, respectively. Not unexpectedly, the drop-outs returned only 12.5 percent. The findings from the survey supported local impressions, namely, that former students were finding employment in the area, and that local occupational information should be considered more seriously. The graduates' evaluation of the curriculum was not used. This was because of a weakness in the check list which was a provision for the respondents to rate courses rather than competencies acquired or activities engaged in. The returns were such as to strongly suggest that the respondents had rated former teachers, rather than the courses they took. Also, many respondents did not rate courses they had taken. Another weakness was that of asking for the respondent's name on the questionnaire. This school has since decided, that in future surveys it will: code its questionnaires; limit the survey to employment-bound graduates if the guidance department continues to follow-up the college-bound students; re-structure the curriculum evaluation section; and clarify some questions that appeared to be ambiguous.

Another small school had a similar experience, with only a 45 percent return. Weaknesses in procedures responsible for the lower return were similar to the one just reported. A second factor was a past history of less than close contact with alumni. In future studies this school plans to exploit the alumni relationships, and to re-structure the curriculum evaluation section.

The large school that attempted a general follow-up included former students of agriculture, distributive education and other cooperative occupational education programs, and of machine shop. The instrument was simple, one-page form dealing mostly with employment status. While the brevity of the form was expected to contribute to a response, a number of factors have been identified as weaknesses, inferior procedures, or handicaps that accounted for the very low return and the consequent lack of value of the survey. The form went out under a cover letter, not from the principal or other administrator, but from the project leader who was not well known to most former students. The effort to enlist the support and cooperation of the guidance staff in this activity had not succeeded. The form had some ambiguous questions, and was not presented in such a way as to appeal to respondents. There had been no previous preparation of graduates for the survey. The survey form was sent to former students too soon after graduation -- less than a year -- and without any indication having been given to them the previous year that they would be contacted for information.

Special Follow-up Surveys

The large system in which follow-up surveys previously had been made did engage in several follow-up activities. One of these was to field test a survey instrument. A qualified interviewer was hired to interview students enrolled in vocational education programs to help establish parameters of response to questions to be used. There appeared to be evidence of gaps in knowledge which students have about the world of work, represented by the courses in which they were enrolled. A survey of graduates of the day-trade program of 1966 was made. Responses showed none of the respondents was unemployed. All were using some of the skills and knowledge learned in the courses. A third follow-up activity dealt with the former students of one of three high schools. This was a part of a 10-year longitudinal study in its fifth year. A random sample of one half of the 1962, 1963, and 1966 graduates were surveyed. All drop-outs also were surveyed. Although the percentage response from the total group was disappointing, the 1966 class produced a 59 percent return. The major objective was to obtain information regarding the effectiveness of the curriculum and related factors. Information was secured on employment and training needs, skills learned, and value of high school experiences to them in subsequent employment situations. As a result the surveyor had questioned the wisdom of seeking information from persons several years out of school regarding curricula because of rapid change in them.

In the other large system, surveys had been made in previous years, so the staff evaluation committee called in consultants to help it evaluate its follow-up procedures. As a result, it has been decided to enlist student help in developing questions, to try out the form with students yet in school, and in other ways to motivate and condition students to all cooperate in responding to a follow-up form, after leaving school. The staff in office education also developed a form to be used in the near future to discover employment information about former business students. A third survey was made, this one going to senior students to obtain information for guidance, specifically in regard to plans for employment and/or further education.

Another survey in one of the small schools was made to follow up former students of agriculture. This was planned by the advisory committee for vocational agriculture, and included graduates of the previous five years who had taken four years of vocational agriculture. All but one of the 81 graduates in these years were accounted for. Those employed in agricultural occupations, or preparing for them, accounted for 35 percent of the total, and 45.2 percent of those not going into military service.

Generalizations Regarding Successful Practices

Several generalizations can be made regarding follow-up studies, as part of local program evaluations. These are tentative, are subject to further trial, grow out of the previous evaluation project, and/or reflect, in part, literature on the subject.

- --The purposes of the survey should be clearly stated and adhered to in all steps.
- --The instrumentation and data gathering techniques should be those that are most effective in eliciting reliable and valid information.
- --Administrative endorsement should be obtained to provide status to the study, support for financing, staff time, and implementation of the findings.
- --The greater the staff involvement and participation in planning, the more effective will the study be.
- --Students should be involved in development and try-out of instruments; and should be motivated before graduation to cooperate in follow-up studies.
- --Citizens' advisory committees can help in setting objectives, in promoting cooperation by the people, in interpreting the findings, and in communication to the community.
- --Surveys should not be made in the same calendar year as the one in which the student graduated, and normally not later than five years after graduation.
- --Evaluations of competencies developed and of competencies needed on the job should be solicited, rather than evaluation of courses.
- --Evaluations of competencies acquired by former students should be supplemented by related information from employers.
- --The instrument used for gathering data should be constructed by a person with competence in research techniques.
- --Tested mailing procedures should be followed.
- --If large numbers are involved, and the instrument is long, electronic data processing procedures should be used.

--The cost of the survey should be estimated and provided for before the study is launched.

--The use of the telephone to supplement mailing generally adds to efficiency of the survey.

The reactions from those schools in which the follow-up studies were deemed successful show an intention to repeat or make permanent the practice of conducting follow-up studies in future evaluations. The schools that were unsuccessful in this activity, nonetheless, intend to try it again and to correct their mistakes. The schools that had previously conducted a follow-up survey indicated their intentions to conduct such studies in the future. This leads to the generalization that such studies should become a universal activity in projects in all schools conducting evaluations of local programs of vocational education.

STUDY OF NEEDS -- CURRICULAR ANALYSIS

> "No longer can the emphasis be on matching the best man with an existing job; it must be placed on providing a suitable job for each man or equipping each man to fill a suitable job...
>
> "Career consciousness must be integrated throughout the schools."[8]

This quotation from the report of the National Advisory Council for Evaluation of Vocational Education epitomizes the point of view of the schools involved in the project. One of the suggestions originally given to them was that occupational training needs be studied and school curricula examined in the light of the projected needs. One way to implement this suggestion would have been to conduct systematic, or formal occupational surveys in each community. This was not done for several reasons. At best, the survey would have been limited to the geographic area served by the school. With one exception, namely the largest school, this geographic area was smaller than the area in which students would later become employed. The available data on occupations in the state were much too gross to be of great practical use in the small and medium schools.

Study of Documents and Recorded Data

Michigan was being covered by a series of area vocational education studies -- surveys to determine the needs for area vocational-technical education programs. These had been completed or nearly completed in the areas in which all but one of the schools were located. The reports of these surveys were available and had been studied by these nine schools. The relatively high sophistication of these schools with respect to occupational opportunities, trends, and training needs was to be expected. This is because the schools in the project were to a considerable degree self-selected. They had been categorized by state leaders as schools that were aware of needs, and making significant strides toward meeting these in school programs. The tenth school became involved in the area study during the year of the project. Some of the activities, and development of recommendations in this school were necessarily postponed because of this. The leaders desired to cooperate in the area study, and believed it would supply needed information for evaluation and planning purposes.

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[8] Advisory Council of Vocational Education, Vocational Education: The Bridge Between Man and His Work, Summary and Recommendations, (Washington, D.C.: U.S. Government Printing Office, 1968), p. 4.

Interviews and Questionnaires to Employers

The information from these sources was supplemented by project leaders in nine schools through informal questionnaires and interviews of key individuals in business and industry, as well as through solicitation of information and suggestions from advisory committee members. In no case, however, was the information obtained in sufficient detail for occupations covering a wide range of fields, so that curricula could be compared directly with the specifics of occupational requirements. On the other hand, considerable specific information was obtained in this way for analysis of office education courses in one large school, one medium school, and two small ones; of certain phases of industrial education in one large, one medium and two small schools; of distributive education in one large, one medium, and two small schools; and of others.

Some of these analyses were made through interviews and/or questionnaires by staff or students. For example, in one of the small schools a questionnaire was sent to 42 employers of office workers in the area. Responses from 29 of these provided helpful information regarding degree of competencies possessed by newly-hired employees and competencies employers look for in office workers. In this same school a business class interviewed 32 office secretaries and obtained much valuable information for curricula improvement. Another small school conducted 27 employer interviews in the community to learn first hand of employment situations and job training needs.

Other analyses were made through citizens' advisory committee discussions. The reports of the deliberations of these committees, in the seven schools that used them, are replete with information on occupational training needs and with statements relative to the reality or viability of programs and curricula. The outcomes and procedures followed with these committees are found in a preceding section of this report.

SPECIAL LOCAL ACTIVITIES

Credit Workshop

As a part of its evaluation effort one of the schools offered a university credit workshop on evaluation of practical arts and vocational education. The workshop enrollment was limited to staff personnel of the local school, and included administrators, high school academic teachers, and elementary teachers, as well as vocational and practical arts teachers.

The local vocational director, who had previously been a faculty member at Michigan State University, served as the workshop instructor. The nine workshop sessions served as the core of the school's evaluation study. Workshop participants formed problem-area groups which fostered involvement at greater depth into specific interest areas related to the total evaluation effort.

Activities growing out of the workshop included an attempt to establish a placement service for the school's youth; improved orientation of youth toward work and career opportunities; a follow-up study of business education graduates; a study of youth employment in the senior high schools; a plan for longer blocks of time for certain industrial arts courses; and evaluation of the health occupations cooperative education program, including related instruction; a study of attitudes of teachers toward vocational education; a junior-high program of practical arts; and a program of unified arts and occupational education in the elementary school.

The school personnel considered the workshop to be very successful. The workshop, in the strict sense, did not limit the participants' activities to those purely evaluative in nature. The workshop was perhaps most effective in bringing together a cross section of people, K-12, including teachers, administrators, and counselors for discussion and program planning for education for the world of work.

Study of Attitudes Toward Work

The staff members associated with one of the local school projects developed an instrument to measure attitudes concerning work and toward vocational education. The instrument was administered to the elementary, junior-high and senior-high students, as well as to teachers and administrators. The local staff member responsible for analyzing the data secured from the instrument resigned from his position without completing the summary of the study, therefore no information is available concerning the findings or validity and reliability of the instrument.

Three-School Meeting

Midway through the project year representatives of the three medium-size schools met at one of the schools to confer with each other in regard to common problems they might have related to their evaluation efforts, and to tour the facilities of the host school. Fourteen local school personnel and a MSU Evaluation Systems Project Research Assistant attended the meeting. The local school personnel represented local project leaders and research associates, school administrators, counselors, and vocational teachers.

Activities of the day-long meeting included a discussion of the evaluation project in the three schools, a discussion of future programs, and a tour of the host school facilities with emphasis on those for vocational education.

While no formal evaluation of this meeting was attempted, all of the participants were most enthusiastic in their support of this type of activity. The fact that sister schools were engaged in various activities without doubt served as a stimulus for action in the schools.

Catalog of Vocational Courses

One large school, as part of its total effort in the project, developed an informational booklet describing their educational offerings in occupational development. The booklet included major emphases and outcomes, and typical activities for each subject taught in distributive education, hospitality services education, industrial arts education, office education, pre-employment program, and trade and industrial education. Eighty-three courses are listed in the booklet which serves as a useful resource to teachers and counselors for helping youth and adults plan their educational programs.

SPECIAL STUDIES

Two special studies were made that relate to the project as a whole, rather than to any one cooperating school. One of these was conceived to contribute to attainment of Objective no. 4 of the project relating to the role of the consultant in evaluation of programs of vocational education. The other was a "spin off" study made in response to a desire expressed by a number of local leaders to more effectively assess the understandings and/or attitudes of local faculty members regarding vocational education. The result was the development and try-out of an inventory. Complete reports of these special studies are included in Appendices E and F. In this section a brief review of each is presented.

The Role of the Consultant in Evaluation of Local Vocational Education Programs

Summary of the Study: Two questionnaire forms were developed to ascertain the role of the vocational education evaluation consultant. One for consultants and one for consulters. Of the 49 questionnaires distributed to the consultants, 31 were returned, for an 83 percent return. Twenty of the 22 consulters receiving questionnaires returned the instrument, for a 91 percent return.

Analysis of the data led to the following conclusions, which apply to the population of the study, in regard to the five questions for which the study sought information.

1. What is a consultant?

   There was agreement between consultants and consulters that a consultant on vocational education evaluation is primarily a resource person. While the consultant as an expert was held second in importance by consultants, this was somewhat subordinated by consulters to the concept of the consultant as a process person.

   Over one-half of the consultants responding to the questionnaire had spent less than 20 percent, however, had spent 80 to 100 percent of their time serving in a consultative role.

Consultants had spent most of their time with administrators, with teachers following closely in second place. The least amount of time had been spent with other consultants and advisory committees, but with local groups receiving somewhat more time.

The planning stage is when most consultants' services had been used. Of less importance were the evaluating, implementing, and innovating stages.

The consultants had spent most of their consulting time in the capacity of furnishing material and resources. The least amount of time had been spent as an expert on evaluation. Of less importance was assisting persons in solving their professional problems.

2. Is there a difference in the way the consultant and consulter perceive the role of the consultant in vocational education evaluation?

   The rank difference coefficient of correlation between consultant and consulter was relatively high for all areas of the study questionnaire. Highest agreement, .904, was related to the work of the consultant in evaluation and the lowest, .692, in regard to the consultant's abilities and characteristics. The degree of agreement of the consultant's traits and his activities was .825, and .832, respectively.

3. What abilities and characteristics should the consultant possess?

   The respondents felt the abilities and characteristics of the consultant should be oriented toward planning, assisting, and recommending, rather than to decision making.

   Regarded as highly important were the abilities to plan, to convey clear thinking, to maintain a close working relationship with group leaders or directors, and to keep up to date on materials.

   The highly important characteristics were to be able to maintain rapport within the group, to be democratic, to be able to accept people, and to grasp the scope of the situation.

4. What activities can the consultant perform to stimulate evaluation?

    There was agreement on the consultant's activities as including planning, suggesting, recommending, listening, criticizing, stimulating, organizing, clarifying, and synthesizing.

    The most frequent activities reported were collecting and recommending resources for use by people involved and listening to problems and plans of groups of participants.

5. What guidelines may be used to direct the consultant in his work?

    Based on the data analyzed and review of related literature, the consultant should:

    --diligently prepare himself and furnish resource materials for the consulters

    --have a broad background of experience in his field before serving as a consultant

    --personally visit the area and the people connected with the problem or situation

    --be dynamic, practical, democratic, sympathetic, and a good organizer

    --assist the group to arrive at a solution to their problem by offering alternative solutions to it

    --assist in setting goals and in interpretating information

    --help the group move toward making a decision

    --help evaluate group goals, processes, and decisions

Background of the Study: Experience of the staff associated with the project prompted an interest in attempting to determine the role of the consultant. This resulted in part from the experience of the project personnel in the performance of consultative activities for the local schools associated with the project. These schools were also using consultants from other sources, especially those with the Michigan Department of Education. Most of the study was conducted by a project research assistant with the cooperation and assistance of the project director and other project research assistants.

Problem: Consultants for vocational education evaluation may not always be utilized effectively because they, or the people who use their services, do not have a clear concept of their role. This lack of knowledge concerning the role of the consultant could result in a less capable performance that would be possible if the consultant and consulter were to better understand the situation. The problem then, becomes one of determining the role of the consultant in vocational education evaluation. This study attempted to answer the following questions:

1. What is a consultant?
2. Is there a difference in the way the consultant and consulter perceive the role of the consultant in vocational education evaluation?
3. What abilities and characteristics should the consultant possess?
4. What activities can the consultant perform to stimulate evaluation?
5. What guidelines may be used to direct the consultant in his work?

A consultant was defined as a person outside the school staff and its clientele that might be affected directly by decisions; who has had experience and/or education that qualify him to give advice, information, interpretations and/or suggestions regarding alternative courses of action or procedures, and/or who has skill in helping professional people to identify and work through their problems to a satisfactory solution.

Consultant types were recognized as those identified by Savage.[9] These include the "expert," the "resource person," and the "consulter" -- one who utilizes the services of the consultant.

Procedures and Development of Checklist: To determine how the consultant and the consulter view the role of the consultant on evaluation in vocational education, two questionnaires were developed.[10] Questionnaire Form I was developed to determine how consultants perceived their role and Form II was utilized to determine the expectations consulters held for the role of the consultant. Items for the questionnaires were developed after conducting a search of the literature on the role of the consultant. The questionnaires were then reviewed by the project director and research assistants. The questionnaires were revised and submitted to state leaders in vocational education in Michigan. Using their suggestions, further revision was made and the forms were submitted to a jury of teacher educators and state consultants. After further revision the forms were submitted to, and approved by the U.S. Office of Education.

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[9] William W. Savage, Consultative Services to Local School Systems, (Chicago: Midwest Administration Center, 1959).

[10] The plan for the study and instruments were developed by Joan Quilling, who also gathered the data and made a preliminary analysis. The analysis was completed and the report prepared by Floyd McKinney. Both were research assistants on the project under the supervision of Harold M. Byram, project leader.

The Populations: The population used for Form I included 31 leaders in vocational education in Michigan universities and in the Michigan Department of Education. Seventeen of the respondents were vocational teacher educators at Michigan State University, Wayne State University, Central Michigan University, Western Michigan University, Eastern Michigan University, and Northern Michigan University. The consultants from the Michigan Department of Education were all employed in the Vocational Education Division.

Design: The forms were mailed to respondents. The major portion of the questionnaire was designed so that the respondent could easily check one of several responses to an item or check a response indicating his agreement or lack of agreement, the importance of the item, or the frequency with which the item should be done.

The following steps constitute the general design of the study.

1. Conduct a review of literature to determine items for the questionnaires.
2. Utilize the Evaluation Systems Project staff in an advisory capacity in developing the questionnaires.
3. Have a jury of experts review the questionnaires.
4. Utilize local project leaders and research associates connected with the Evaluation Systems Project and vocational educators in

Michigan Universities and the Michigan Department of Education to respond to the questionnaire.

Analysis: Thirty-one individuals responded to Form I of the questionnaire. Assuming the respondents would equally divide their choices, the items with three-response choices would have about ten responses per choice, and the items with four-response choices would have about eight responses per choice. If a rating of 2-1-0 is assigned to the items with three-response choices and a rating of 3-2-1-0 to the items with four-response choices the total score for such items would then be 30 to 48 respectively. For an item to be rejected it was necessary for its total score to be less than 30 for a three-response choice item, and less than 48 for a four-response choice item.

Twenty individuals responded to Form II of the questionnaire. The same procedure as described for Form I was used to determine the level of rejection for Form II. For an item to be rejected it was necessary for its total score to be less than 21 for a three-response choice item and less than 30 for a four-response choice item.

An Example of the Use of a Vocational Education Information Inventory

Summary of the Study: A sixty-item instrument was designed with the original purpose of measuring change which might occur as a result of the Evaluation Systems Project having been in operation in a local school system. Due to delays in the development of the instrument this measurement of change was not possible. However, the instrument was provided to school systems participating in the project, with the suggestion that it might be used to measure the agreement or lack of agreement concerning the understandings about vocational education between certain groups within their school systems. The data presented in this report represent the results of the trial in one school in the use of the Vocational Education Information Inventory.

Returns were received from 104 teachers of vocational education and 18 administrators in the system. A t-test was computed for each item to determine significant differences between administrators and teachers. Items were considered significant at the .05 level of significance. The administrators and teachers agreed with the panel of judges on all items, although the extent of agreement varied from item to item.

Fifteen of the items were found to show a significant difference in the understanding or attitude of teachers as compared to administrators. The administrators had a lower average score on all 15 items than the teachers. The items showing a significant difference at the .05 level are listed below.

4. Vocational education programs tend to result in higher national per capita incomes.
5. Vocational education increases the employment rate of workers.
*15. Cooperative work experience programs contribute little to the effectiveness of vocational education programs.
17. Vocational education should emphasize the development of abilities that can be used for many years.
*18. The schools need not accept the responsibility of teaching students how to write a letter of application for a job.
19. Vocational education should prepare its clientele for useful employment.
24. Manpower needs can be partially met through vocational education.
*30. Employer and employee organizations should not expect to be invited to cooperate with the school in planning its vocational education programs.
31. Mechanization increases the need for specialized training.
33. Manpower needs of the community should be considered in determining the type of vocational education programs to offer.
*36. Simulated experiences are as successful as on-the-job occupational experiences in training for employment.
38. A guidance program should include effective follow-up services.
49. Many women need vocational education experiences to vitalize their old skills and to learn new skills.

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* The panel of judges disagreed with these items.

*56. If a person is properly trained he can do well in any occupation.

59. People should be satisfied with, and be making progress in their jobs as a result of their vocational education experiences.

Background: As the Evaluation Systems Project progressed through its various stages it became evident that some attempt should be made to measure the change which might occur among teachers and administrators at the local school level as a result of the project having been in operation within the school system. One of the evaluative techniques developed for this purpose was a "Vocational Education Information Inventory." The Inventory was developed after the project was well under way in local schools so no measurement of the individuals could take place prior to the initiation of the project. The data presented in this report are from one school system that used the Inventory close to the end of the project year. This report is made in an effort to show how the data secured from the Inventory might be used by a local school system and/or researchers wishing to measure change on the part of certain project participants and those directly or indirectly affected by a project.

Problem: The prospect of additional financial assistance, and the status associated with a state, or nationally recognized research project may have considerable appeal to a school system. This may be due also to a realization of the need for change or redirection of programs. The question that is extremely difficult to answer is the extent of change which results from participation in a developmental project by a local school system.

One of the more important changes which might be brought about by a project such as this, is a change in the attitudes and/or understandings of those individuals teaching and administering the local program of vocational education. This study was an attempt to measure if such a change had taken place.

Procedures

Development of Instrument: Items for the Vocational Education

Inventory were developed by a project research assistant.[11] The items were derived from a review of literature and the experiences of the project personnel. Following several reviews of the instrument by the project director and research assistants the Inventory was submitted to a panel of vocational teacher educators and consultants. A panel of 19 judges gave suggestions for the improvement and addition or deletion of certain items.

The members of the panel of judges also marked their choices for each item according to the following scale:

SA	Strongly Agree or Accept
A	Agree or Accept
U	Undecided
D	Disagree
SD	Strongly Disagree

One of the schools participating in the project used the instrument in conjunction with a vocational education evaluation class which was part of its local evaluation effort. The results of this trial run of the instrument were most helpful in identifying questionable items. The revised instrument was then submitted to the U.S. Office of Education for approval.

The instrument itself was arranged so that it could be answered on a mechanically scored answer sheet. From these sheets computer cards could be automatically produced for data analyzation and ease of storage.

Population: When the idea of an instrument to measure change in the understandings and information of project participants was first conceived it was hoped that all of the local schools connected with the Project would make use of the instrument. Delays in getting the instrument to these schools resulted in rather poor usage, but the experience of one school and an analyzation of the data herein does provide an example which can be utilized in future studies. Project personnel had hoped the population would include all vocational education personnel, administrators, and, in some cases perhaps, all teachers in a local school system.

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[11] Floyd McKinney, with advice from Harold M. Byram, Project Leader.

Design: These steps were followed in conducting the study:

a) A review of literature was made to secure appropriate items for the instrument.

b) The instrument was critiqued by the project leader and research assistants.

c) A trial run of the instrument was made at one of the participating schools.

d) A panel of judges was selected to review and rate the items.

e) Approval of the instrument was secured from the U.S. Office of Education.

f) Local schools were given the option of using the instrument. Most of the project schools requested copies.

g) Answer sheets were obtained from one school so that the data could be presented and analyzed.

Analysis: For those items on the instrument with which the panel of judges agreed, the following scores were assigned: SA=5, A=4, U=3, D=2, SD=1. For those items with which the majority of the judges disagreed, scale scores were reversed to provide comparable responses for computation purposes. An average score was then secured for each item as marked by the teachers and administrators.

Significance of differences between teachers and administrators was determined by use of the t-test. Items were considered significant at the .05 level of significance.

Instrument for Evaluation of Citizens' Committee Activities[12]

As the project progressed it became evident that a great deal of local school staff time and effort was being expended in organizing and using citizens' committees. A "Checklist for Evaluating School Citizens' Committees for Vocational Education Evaluation" was developed in an effort to help local project leaders and research assistants in evaluating citizens' committees in their schools from a review of the literature and the experiences of the MSU project staff. Before final publication the Checklist was reviewed by one of the local school project leaders who had been active in organizing several successful citizens' committees. See Appendix D for a copy of the Checklist.

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[12] Developed by Floyd McKinney, research assistant.

SPECIFIC CHANGES RESULTING FROM, OR RELATED TO THE LOCAL PROGRAM EVALUATION

From the final project reports, and from year-end, depth interviews, a wide variety of changes were identified. Some of these could be classed as innovations, others as specific implementation acts or adoptions, and still others as specific aspects of plans. It is probable that there are other changes in the planning stage and therefore not reported at the close of the local project year. No distinction has been made between those which were a direct result of the evaluation project and those resulting in part from the project, but also associated with other factors. These are reported by size groupings of the schools.

Small Schools

School A reported the following:

- --Curricula revisions in agriculture to place greater emphasis on off-farm agricultural occupations and in home economics, with emphasis on family living
- --Enrollment increase in industrial education courses
- --Acceptance for implementation of the recommendation calling for released time for vocational department heads for curriculum study
- --Vocational certification of teachers of office education

School B reported the following:

- --The development of a three-phase "Careers and Occupational Guidance Program." Phases include: (1) 9th-grade level career unit in English; (2) teachers in specialized areas submitting list of materials and films to show career opportunities; and (3) 11th-grade unit on preparing for employment
- --The addition of a ½-time counselor at both junior-high school and senior-high school levels
- --The selection and purchase of $5,000 worth of audio-visual materials for vocational guidance of students

--Addition of a social studies course in the curriculum, with emphasis on occupational orientation

--Continuance of employer interviews and advisory committees

School C reported the following:

--The integration of family-living units into the home economics curriculum

--Standards developed for statement of behavioral goals in retailing from survey of employers

School D reported the following:

--Establishment of the position of local director of vocational education, and appointment of member of leadership team to the position

--New equipment provided by industries having representatives on the advisory committees

Medium Schools

School A reported the following:

--Advisory committees established for all vocational areas

--Position of department head in business education created, and member or project leadership team appointed to the position

--Established need for part-time assistant director of vocational education for the high-school level (director presently identified largely with post-high school program)

--Added course in home economics for boys

--Third teacher of home economics employed

--Published course description booklet for student, teachers, and counselor use

School B reported the following:

--Made six major curricular changes:

1. Reorganized and re-structured curriculum in agriculture
2. Combined Homemaking II and III into one course
3. Added course, "Food Service Training"
4. Reorganized Graphics I course
5. Revised occupational arts units in grades 7-8-9
6. Introduced simulated distributive education laboratory for "Sales and Retailing" course

--Re-planned placement and follow-up program for all students

School C reported the following:

--A bond issue for construction of a new high school, with greatly expanded facilities for vocational education, was approved by the voters after two previous defeats. The opinion of those involved in the evaluation project is that changes in attitudes toward, and understandings about vocational education on the part of teachers and citizens were a major factor in bringing about this accomplishment.

Large Schools

School A reported the following:

--Now have catalogue descriptions, and statement of objectives and course outlines of all vocational courses

--Now have inventory of facilities and equipment for each vocational department

--Expansion of curriculum through addition of the following courses:

Food Service Training: one for boys and one for girls
Distributive Education III
Typing II
Vocational Secretarial Training
Business Machines
General Office
Home Mechanics
Woodwork V
Blue Print Reading
Forestry
Fruit Production

--Established position of vocational coordinator and appointed a staff member to fill the position

--Dropped courses in personal clothing, bookkeeping III, and secretarial practice

School B reported the following:

--Made survey of 1965-66 day-trade graduates (75 students)

--Made survey of drop-outs, and re-established communications with them

--Complete compilation made of all vocational courses

--Reports of research studies completed within the district published and distributed

--Bibliography of vocational education (18 categories) prepared and distributed

--Pilot project being carried out to determine necessity and feasibility of offering a course in occupations at the junior-high school level

--Cooperative discussions between vocational education teachers and guidance counselors held to establish responsibilities and role in vocational guidance

--New program for junior-high school "Early bird" and "Late bird", initiated

--Additional programs or courses installed are:

Auto Mechanics
Appliance Repair
Cosmetology
Vocational Printing
Technical Drafting
Residential Development
Drafting and Design
Auto Body Bump & Paint
Hospital Occupations
Engine Mechanics
Machine Operator
Hospitality Service Industries 1 year
Quantity Cookery
Food Merchandising
Machinist Toolmaker
Service Station
Electronics Prog. & Course I & II

School C reported the following:

--Ground-work laid for establishing a placement service for the school

--Ground-work laid for improved orientation toward the occupational world

--A follow-up of business education graduates made which has paved the way for an over-all follow-up study for the school

--Conducted study of employment of high school youth in the district

--Provided longer blocks of time for industrial arts classes

--Developed a unified arts and occupational education program

-Auto mechanics workshop for elementary teachers

-Procurement of industrial arts equipment for elementary grades through NDEA assistance

-Workshop for elementary teachers on handicraft projects

-Created position of elementary consultant on industrial arts

--Occupations advisory committees organized for office, distributive, trade and industrial and health

--Independent studies conducted the following year by four teachers

--Vocational guidance materials added

--An interdisciplinary course established, including English, Mathematics, Science, and Industrial Arts

III. CONCLUSIONS, RECOMMENDATIONS and IMPLICATIONS

CONCLUSIONS REGARDING ATTAINMENT OF OBJECTIVES

The conclusions that follow are organized according to the objectives that were drawn up for the project. These conclusions are supported in part by the records and reports of the 10 schools involved, and in part by the observations made and information obtained by the state project leader through his contacts with them. They may reflect the project leader's interest in the project and the values held by him.

1. To further try out and demonstrate a system for the evaluation of vocational education on the local level which originated in the Michigan Project on Evaluation of Local Programs of Vocational Education.

The system for evaluation was tried out, not in systems of all sizes but in those having enrollments between 2,000 and 30,000, K-12, and in all regions of Michigan. It was tried out in terms of activities, since all schools prepared plans; all had staff committees on evaluation, and otherwise involved a total of 317 local educators; all studied curricula in terms of needs for occupational education; and all schools either conducted some type of follow-up study and/or had done so in the immediate past, or engaged in planning for follow-up studies. The majority organized and used a total of 45 advisory committees involving 303 citizens. In other words, all activities engaged in by schools in the previous Michigan evaluation project were tried out in the present project.

The actual demonstration of the system was accomplished in several ways. One was through communication to all the schools involved, through progress report meetings, and a final meeting on implementation. Another communication was to other school people in Michigan through presentations by the chief investigator on 16 different occasions. The revision of the manual on evaluation of local programs was based in large part on the experience of the 10 cooperating schools, and thus also represents a demonstration of the system. The conclusion is that the system was tried out and successfully demonstrated. In cases where an activity or procedure was not carried out with success the circumstances related to or responsible for the lack of success have been reported. These were a minority however. Eight of the ten schools' leadership teams and/or administrators indicated that the evaluation effort would continue.

2. To discover and/or devise new or improved procedures for local program evaluation.

The fact that each school was in some way unique in its approach or method of evaluation indicates that a great deal of flexibility was provided for local initiative as to procedures used in the evaluation effort. Schools varied in the procedures they used, and it was expected and considered desirable that they would vary.

Many of these new or improved procedures have been reported here and in the revised Manual. The more numerous ones relate to follow-up studies, to advisory committees, and to staff involvement. Procedures not previously tried out include the credit workshop in one school, and the preparation of a catalogue of vocational courses with amplified statements regarding each course.

From the standpoint of organization and structure, two improved practices were tried out and/or demonstrated. One was the obtaining of administrative commitment to the project, thus underlining the realistic nature of the effort, and consequently of the recommendations to be developed and made in each school. This was reinforced by administrative support given at crucial stages during the local project year. The other was the designation and use of the leadership team in each school. If one member had to be absent from any state or local project activity the other member represented the team from the local school. Identification of the functions to be performed by each also seemed to be of value, so that the two individuals could complement each other. The conclusion is that not only were new or improved procedures discovered or developed, but also that the project tended to validate certain procedures indicated in the literature as desirable in an evaluation effort.

3. To establish a working environment in which learning of evaluation procedures for both local school personnel and potential leaders at state and national levels of vocational education can take place.

This was accomplished through the functioning of the 10 leadership teams and their staff and citizen committees. The working environment, furthermore, extended to the workshop and was represented in the five other meetings held for these teams and the 54 visits made by the state project leader. The materials that were made available to these teams also enhanced the environment.

The working environment for the state and local leaders was not as adequate as had been hoped for. The four research assistants assisted with three meetings of all teams and carried out various responsibilities of a leadership nature. However, a total of only 24 consultation requests were available to them for this type of experience. The other research activities in which these assistants engaged, however, supplemented these experiences, and presumably contributed to their growth toward a professional goal of filling a state leadership role. These included minor structured research studies, development of instruments, bibliographical search, and assistance with conferences. The conclusion is that the working environment was very satisfactory for the local leadership teams, and satisfactory for those receiving experience at the state level.

4. To identify and describe the role of the consultant in program evaluation.

One aspect of this objective was achieved through the role analysis study made and reported in a separate section of this report. The identification of the role specifically with evaluation and with vocational education was not necessarily accomplished but can be inferred.

The other aspect of the role was the nature of requests for consultants' services relative to evaluation procedures which were general, rather than relating to specific vocational fields. This would suggest that there is a need or demand for state consultative services not necessarily identified with any one of the vocational fields.

5. To uncover situations that could be considered as potential research and development centers.

As the project progressed through the year it was evident that certain conditions within the local school produced desirable or undesirable effects on the expected performance on the project. Generally, the enthusiasm and atmosphere for research and innovation generated and provided by the administration was the key factor in providing the type of situation needed at the local level for research and development activities. There were three schools identified, in addition to those already involved in another R & D project, that could be considered for such projects or similar ones.

DEVELOPMENT OF LOCAL LEADERSHIP IN EVALUATION

Good leadership at the local level was established as crucial for success of the evaluation in the local school. As would be expected, some schools had better project leaders and/or research associates than other schools. As the project progressed, however, it became apparent that the local leadership teams were growing in their ability to deal more effectively with staff and citizens in the evaluation effort. Evidences of this include the promotion to greater leadership responsibilities of four persons either during or shortly following the project year. These were in two large schools, one medium school and one small school. Four leaders from three other schools were asked to make presentations regarding their local project activities on six different occasions in five different states. Two leadership team members have resumed or started new graduate programs. It can be concluded that leaders in most of the cooperating schools made substantial professional growth, particularly in competencies required in the evaluation activities undertaken.

STRENGTHS AND WEAKNESSES OF THE SYSTEM

Strengths

The emphasis placed on goals and outcomes, rather than solely on ways and means resulted in perhaps the greatest strength of the project. This encouraged schools to look at their objectives and to attempt to determine the success of the program through consideration of the end product -- the former student. Ways and means were not neglected, but the emphasis was on output.

The involvement of local staff and citizens was a fundamental concept of the evaluation system and proved to be one of the more important. Staff members were brought together as a group, in some cases, for the first time to work on a common effort. The idea that those responsible for the program should be involved in its evaluation proved to be sound. Local citizens, where they were used, were enthusiastic and very helpful in the evaluation effort.

Local school personnel were very receptive to the consultative services offered by the project. Schools frequently requested consultants either from the project or the Michigan Department of Education.

A desirable strength of the project was its built-in feature of bringing together representatives of many different groups -- staff, citizens, consultants, and administrators -- to generate and sustain an enthusiasm for evaluation and better understanding of vocational education. The momentum generated appears to have been carried forward in most of the schools, following official termination of the project.

Weaknesses

The local schools were not required to develop or revise objectives for vocational education programs or courses. They were encouraged to do so, but it was not mandatory. It had been hoped that if objectives had been stated quite specifically and behavioral goals stated, the attainment of these would have been specifically assessed. Some schools paid a minimum of attention to objectives and this may have resulted in some less profitable activity on the part of these schools. This may be the most serious weakness of this project.

No objective measurement was undertaken to determine the extent of change in the local school staff or citizens as a result of participation in the project. Subjective measures were used, and these indicated positive results.

Some other limitations in scope could be considered weaknesses. In three of the school districts there is a community college offering technical education programs. These were not included. Another limitation was that very little attention was given to the evaluation of adult vocational education programs. This was due in part to the greater local concern with the secondary education programs, and in part to the jurisdictional lines existing. A strong, comprehensive evaluation would have included programs at both of these other levels.

MANUAL FOR TEACHERS, ADMINISTRATORS, AND CITIZENS ON PROGRAM EVALUATION

Evaluation of Local Vocational Education Programs, A Manual for Administrators, Teachers, and Citizens, by Harold M. Byram and Floyd McKinney, second edition, was published as a result of this project and the preceding project, previously referred to. The Manual incorporates many of the ideas tried out in both projects, as well as a few suggested in the literature, but which need further testing.

NEED FOR DETERMINING GENERALIZABILITY OF THE SYSTEM

The original project, and this project involved only schools located in Michigan. The question may be raised regarding the genralizability of the system to other states. Because of the crucial importance of local program evaluation it is recommended that the system developed and tried out in this project be tried out in its same form or be modified to suit needs in other states. It needs to be determined whether the system is workable in states with different kinds of district organization, different structure for state leadership and/or different leadership capabilities.

IV. SUPPLEMENTARY and APPENDIX MATERIALS

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APPENDIX A

RESEARCH AND DEVELOPMENT PROGRAM
IN VOCATIONAL-TECHNICAL EDUCATION

Michigan State University, 310 Erickson Hall

MEMORANDUM OF AGREEMENT

The Research and Development Program in Vocational-Technical Education at Michigan State University and the ______________________________ School District, City of ________________, State of __________________ agree in principle via this memorandum to conducting a research program in vocational education. This agreement is one of cooperative intent to work for the improvement of vocational education, rather than a legal contract.

The research activity to which this memorandum pertains is mainly supported by a grant from the United States Office of Education to Michigan State University under contract #OE-5-85-111.

Both Michigan State University and the __________________________ School District agree to carry out the research and development effort beginning ______________ 1966 and continue at least through ________________, depending on United States Office of Education continuation of fund support. The personnel at Michigan State University and at ______________ School District recognize that each should be free to suggest modification of this research and development program at any time and that either may withdraw at any time. In such event the school district agrees to repay the pro-rata share of funds paid.

The specifications of this research and development endeavor are shown on the attachment.

Considerations of this agreement include:

1. All research data and reports are confidential and the property of the United States Office of Education until formally released by the MSU Project Director in conformity with the terms of the U.S.O.E. contract.

2. Pilot schools and state departments involved in this research and development program are considered for payment purposes as providing consultant services. Subject to U.S.O.E. approval, payments will be made by purchase order directly to schools involved.

/s/ ______________________________	/s/ ______________________________
Peter G. Haines, Director Research and Development Program in Vocational-Technical Education Michigan State University	Superintendent or Authorized Representative School ______________________ City __________ State __________

Financial Considerations:

MSU will provide funds to the local distract to assist the school to bear the added costs of the project. Payment will be made in the form of an honorarium of $ _________ in recognition of the appointment of a research associate. Each MSU contribution will be paid in installments on November 30, 1966, March 31, 1967 and June 30, 1967.

Local School Personnel Responsible:

Local director of the project:

____

Address ______________________________ Phone ________________

Research associate on the project:

____

Address ______________________________ Phone ________________

Michigan State University Project Leader:

Harold M. Byram
339 Erickson Hall, Phone: 355-1837
Michigan State University
East Lansing, Michigan

Project on Evaluation Systems for Programs of Vocational Education in the Public Schools

Description of Project:

To establish a project to further test a system for local program evaluation; to discover or develop additional or better evaluation procedures; to identify or describe the role of consultants in program evaluation; to provide a working environment for training in evaluation procedures; and to uncover situations that could be considered as potential R & D centers.

Responsibilities of Michigan State University

--Provide conferences and workshops to further develop evaluation competencies of representatives from cooperating schools, including travel and subsistence costs.

--Provide consultative service on evaluation of vocational education in general and within vocational fields, including visits to cooperating schools.

--Provide short-time consultant help as needed and/or requested.

--Assist in locating part-time assistants, as requested.

--Provide manual on evaluation, evaluation instruments and related materials and computer service.

--Assist in analyzing records, reports and other data from cooperating schools.

--Prepare and publish report on the project.

Responsibilities of the Cooperating School:

--Initiate and conduct evaluation project in line with general guidelines provided. The definition of, and scope of vocational education is a prerogative of the cooperating school.

--Provide time for local project director and research associate commensurate with the size of school and size and scope of vocational education program.

--Provide essential clerical services and facilities.

--Keep appropriate records of activities and prepare report on the local project.

--Make requests for and utilize consultant service appropriate to needs.

APPENDIX B

EVALUATION SYSTEMS PROJECT

Questions for Interviewing Local Administrator

1. What do you see as the future or continuation of your effort in local program evaluation?
2. To what extent has the evaluation project in your school accomplished what you hoped it would when it was decided that your school would cooperate?
3. Were there any inhibiting factors that arose during the project, that proved difficult to deal with? If so, what? Any enhancing factors? If so, what?
4. To what extent was the communication process between your project leader and/or research associate and the teaching and administrative staffs regular and adequately informative?
5. How has the school board been involved in the project?

EVALUATION SYSTEMS PROJECT
QUESTIONS FOR INTERVIEW
WITH
LOCAL PROJECT LEADER AND RESEARCH ASSOCIATE

1. When you made your plan for your evaluation project you set up specific objectives to be accomplished. How well has your Evaluation Systems project helped you to reach these objectives?

2. Have you, since beginning the work of the project, changed to objectives of your local project or think now that they should be changed? If so, how?

3. Do you feel that the staff involvement in your school was greater than required, sufficient, or insufficient?

4. The carrying out of the project through committees necessitates time for planning, meeting, and working. What are some of the inhibiting factors in providing staff with planning, meeting, and working time? What are some of the enhancing factors?

5. Do you feel that the philosophy of vocational education held by your staff has changed during the year? If so, in what ways?

6. Is there a tangible improvement of community attitudes toward, and understanding of the vocational and technical education needs of the school and community? If so, in what ways?

7. To what extent has the project stimulated or developed community understanding of vocational-technical education?

8. What do you see as the future or continuation of the effort at local program evaluation?

9. What changes from the procedures that you followed would you recommend for another school that might like to conduct an evaluation of its program?

10. What is your evaluation of the consultative service received from Michigan State University staff members on the project?

11. Would you have liked more instrumentation?

APPENDIX C

CHECKLIST FOR EVALUATING SCHOOL CITIZENS' COMMITTEES FOR VOCATIONAL EDUCATION EVALUATION

Directions: Mark each question in relation to the operation of the citizens' committee evaluating vocational education in your school system.

YES	NO	
		1. Is provision made for the permanence and continuity of the committee?
		2. Has the local board of education developed policies relative to:
		a. citizen committee functions
		b. number of committee members
		c. method in which members are chosen
		d. method of replacing members when their terms expire or when vacancies occur
		e. procedures for communicating with school personnel and board members
		f. relationships of the committee to board members, administrators, teachers, students, and the community
		3. Are members of the citizens' committee nominated by the school staff?
		4. Does the board of education approve the appointment of individuals to the citizens' committee?
		5. Are members selected because of their:
		a. interest
		b. knowledge
		c. ability
		d. willingness to serve
		e. "segment or interest group" representation
		6. Members are notified of their appointment by:
		a. letter
		b. personal visit by a school representative

YES	NO	
		7. Are committee members appointed for a definite length of time?
		8. Are committee membership replacements staggered?
		9. Does structure provide that members will not succeed themselves?
		10. Is the chairman elected from the ranks of the committee?
		11. Is the school represented by an ex-officio member of the committee?
		12. Are committee members aware of the specific purposes for which the committee is formed?
		13. Are committee members informed well in advance of meeting dates and places?
		14. Are committee meetings held only when sufficient need exists to merit the meeting of the committee?
		15. Is publicity provided for committee activities?
		16. Are formal committee recommendations written?
		17. Are committee recommendations channeled through appropriate school authorities?
		18. Does the citizens' committee accept the philosophy that its duty is that of recommendation, not of legislation or administration?
		19. Does committee membership include representatives of all social classes in the community?
		20. Are young adults represented in the committee membership?
		21. Is there a feeling of need for the citizens' committe by: a. board members
		b. administrators
		c. school staff personnel
		22. Are research expenses of the committee paid for by the school?

YES	NO	
		23. As related specifically to vocational education evaluation, does the citizens' committee: a. make suggestions concerning the objectives of the school program of vocational education
		b. advise on curriculum planning
		c. make suggestions regarding the extent to which occupational skills should be taught in the school
		d. help develop instruments for follow-up of students
		e. help conduct surveys of former students, parents, and/or employers
		f. help acquaint the community with the needs of vocational education
		g. provide feedback to employers and other citizens
		h. help assemble and analyze materials relative to program evaluation
		i. help develop procedures for follow-up of students
		j. help interview former students, parents, and/or employers

Directions: Mark the remaining questions using the following key:

S - satisfactory progress in this area

P - only partial success in this area

N - not satisfied with progress in this area

S	P	N	
			24. Are committee members fully aware of the purpose of the citizens' committee?
			25. Do committee members possess a working knowledge of the philosophy and objectives of vocational education?
			26. Is an information program provided that will keep committee members abreast of new vocational education developments?
			27. Is the committee formally organized?
			28. Does the school representative perceive his duty largely as that of requesting rather than giving advice?
			29. Are committee members well oriented in the principles of vocational education?

S	P	N	
			30. Do school personnel work with the citizens' committee when the citizens' committee is concerned with a specific portion of the school curriculum for which a school staff member is responsible?
			31. Are committee members invited to school functions?
			32. Are committee members considered a part of the "school family?"
			33. Are preconceived notions sublimated or minimized in actions of the citizens' committee?
			34. Does the committee study and debate the issues before making final recommendations?
			35. Can the committee request school personnel to conduct research?
			36. Does the school provide adequate research services for the citizens' committee?

APPENDIX D

CAPSULE DESCRIPTIONS OF LOCAL PROJECTS*

Alpena

A community of 14,682, Alpena is located in Northeast Michigan on the shore of Lake Huron. The school district covers considerable rural area and includes substantial industrial development. The K-12 enrollment was 8,340. Business education, home economics, agricultural education, industrial education, and cooperative education are offered in the school's secondary vocational education program. There is a technical education program in the local community college, but not included in the evaluation project.

Staff members most actively involved in the evaluation effort were the vocational department heads. Citizen advisory committees were not used, but plans were laid for establishment of these committees, which have since been carried out.

Evaluation activities included participation in a three-school meeting regarding evaluation of vocational education, a follow-up study of '65-'66 graduates, establishment of a card file on all graduates, and a review of departmental objectives.

Benton Harbor

Benton Harbor is located in Southwest Michigan on the shore of Lake Michigan. The city had a population of 19,136, with the district serving an estimated population of 47,492. Urban, suburban, and rural segments of population are represented within the district. The area is served with a relatively large amount of heavy and light industry, and a heavy

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[*] Does not include Stephenson, which was not officially a part of the project, although consultant resources were made available to, and meetings were attended by its project leader.

concentration of fruit production. It has an important summer tourist and vacation business. The K-12 enrollment was 11,900. The school's vocational education program includes business and distributive education, home economics, agricultural education, industrial education, and cooperative education. Eleven staff members and administrators constituted the evaluation project central committee. Several meetings of this committee were held, with the project director meeting regularly with individual representatives of each of the vocational areas.

Ten different citizens advisory committees were used, involving 63 different community citizens.

The evaluation activities included the development of basic objectives for each vocational class, course outlines in each vocational subject, and analysis of vocational facilities and equipment, a follow-up survey of one class of former students, a look at the qualifications of the vocational teachers, and the use of citizens' advisory committees.

Big Rapids

Located on the Muskegon River at the intersection of highways M-20 and US-131, Big Rapids is a community with a population of about 12,000. The area is served by several industries and businesses and is the home of Ferris State College. Total enrollment of the Big Rapids school system was about 2,500, with almost 800 of these in high school. The vocational education program includes offerings in home economics, agricultural education, non-reimbursed business education, and cooperative education.

Representatives from the school's administration and faculty members from the departments of home economics, business education, industrial arts, and guidance and counseling served as staff committee for a total involvement of 20 members. Many of the staff meetings were informal, with no released time being given for such meetings.

Big Rapids did not use citizens in any capacity in its evaluation effort, although there is a past history of some citizen involvement.

Consultant services were utilized in developing the questionnaire for the follow-up of former students and in preparing the data for computer analyzation. The chief evaluation effort was this follow-up study of the classes of 1966, 1965, and 1962.

Corunna

Corunna, a town of 2,746 persons, is centered between Flint, Lansing, and Saginaw. Some small industry exists in the area, but for the most part agriculture is the dominant economic force. The larger percent of the K-12 student body of 2,460 was from the rural area. The school's vocational education program includes offerings in office and distributive education, home economics, agricultural education, and industrial education.

Seventeen of the school's teachers and administrators served on a staff committee and met five times. Four of these meetings were held jointly with the citizens' advisory committee. Twenty-four community citizens served as members of the vocational advisory committee. All staff members and citizens usually met jointly and then continued their work in the areas of trade and industry, distributive, office, agriculture, and health and food service. Both staff and citizen committee members previewed and assisted in the analysis of the results of a questionnaire which was a part of a follow-up study of former students. The final meeting of the joint citizen-staff committee was a banquet held at one of the school buildings. The school administration and the local board of education were in attendance at the meeting to hear the recommendations of the various citizen-staff committees.

School administrators were involved in the evaluation effort as members of the citizen-staff committee. The local project leader was assistant superintendent of schools and the research associate was the director of vocational education.

Consultant services were utilized in the development, scoring, and analyzing of the follow-up study, in the specialized areas of vocational education, and in the motivation and stimulation of the citizen-staff committee.

The staff committee reviewed the objectives of the vocational education department at its first meeting. Much of the evaluation effort centered around a follow-up of the 1961 and 1965 high school graduates. A questionnaire type of follow-up was used.

Released time was given vocational staff members to visit three places of employment in their related fields. A general questionnaire was used for discussion purposes when interviewing employers.

Fremont

A town of 3,384 population, Fremont is located in Western Michigan about 30 miles from the shore of Lake Michigan. Fremont is basically a one-industry (food processing) town, with the school area comprising considerable rural area. A substantial number of people commute to surrounding areas for work. The K-12 enrollment was 2,600. The school's vocational education program includes offerings in home economics, agricultural education, industrial education, non-reimbursed business education, and cooperative education.

All vocational staff members were informed of the project and its purpose. The most involvement was limited to two administrators, the project leader and research associate, and the vocational department heads.

Twenty-four community citizens were involved as members of four different vocational citizens advisory committees. One department met individually with members of the advisory committee. The committees for the other three departments met for an average of at least three times.

The evaluation activities included a survey of local secretaries concerning the value of their high school business education courses, a survey of office and retail employers, a survey of a 9-11-grade students to determine their interest in home economics, a survey of past vocational agriculture graduates, a survey of current vocational agriculture students, and a start toward a survey concerning the interest in shared-time vocational classes among secondary schools in the county.

Hillsdale

Hillsdale, a community of 7,962, is located in Southern Michigan, about 13 miles from the Michigan-Ohio state line. The area could be classified as rural-industrial. The K-12 enrollment was 2,765. The school's vocational program consists of home economics, agricultural education, non-reimbursed business education, industrial education, and cooperative education.

All vocational personnel were involved in the evaluation effort either as members of the central evaluation committee and/or as members of the sub-committees.

Citizens were used on three advisory committees. Their efforts were directed toward providing advice on course content and on the suitability of facilities and equipment. Consultant services of Michigan State University were used.

Evaluation activities included a follow-up study of graduates, a questionnaire study concerning hiring practices of metal processing employers, and evaluation of the vocational facilities.

Lansing

Located in South Central Michigan, Lansing is a city with a population of 120,500. The city serves a much larger metropolitan area, is the site of the state capitol, is adjacent to East Lansing -- the home of Michigan State University -- and has a relatively large amount of industry, including the home plant of General Motors Oldsmobile Division. The Lansing school system enrolled 32,109 in grades K-12 and offered vocational education programs in business and distributive education, home economics, industrial education, cosmetology, food services, and cooperative education. The local community college provides technical education programs. These were not included in the evaluation project.

Faculty involvement totaled 90 persons. However, only a small proportion participated in a totally active capacity. The board of education and school administrators were informed and involved where possible.

Thirteen different vocational citizens' advisory committees, involving 109 community citizens participated in the evaluation effort. These committees were already a part of the operation of the school's program and normally meet once a year.

The evaluation activities included a survey of the 1965-66 day-trade students, a dropout survey, high school curriculum choice study, dissemination of research, bibliographies of vocational education studies, information about sources of occupational information, role of vocational guidance, course descriptions and curriculum and instructional techniques information sheet.

Niles

Niles had a population of 13,842, and is located in the Southwestern part of Michigan, about 6 miles from the Michigan-Indiana line. A large number of the population find employment in the industries in the immediate Niles area and in the large industrial complex of South Bend. The Niles school system served 6,510 students in the K-12 grades. Business education, home economics, agricultural education, industrial education, and cooperative education are offered in the vocational education program.

Twenty-seven of the school's administrators and staff served on the staff evaluation committee. Seven different meetings were held with some released time provided the staff. School administrators were actively involved in the project through their participation on the steering committee. Consultant services utilized by the school were mainly those connected with the Michigan Department of Education.

Ten different citizens' advisory committees involving 68 different citizens were formed to assist in the evaluation effort. These committees held a total of 50 meetings and assisted in the evaluation of objectives, curricula, and facilities.

The evaluation activities centered in these advisory committees, but also included departmental descriptions of programs, departmental self-evaluations, a student evaluation of guidance and counseling services, development of philosophy and objectives for occupational education, a study of the feasibility of a shared-time program, a study of organizational patterns, a study of students enrolled, not enrolled, and participation in a three-school meeting regarding evaluation of vocational education.

Sault Ste. Marie

Sault Ste. Marie is the one school located in the Northern Peninsula. It had a population of 18,722 and a principal industry is the ship canal which carries the largest annual tonnage of any in the country. It is located across the river from Sault Ste. Marie, Ontario, Canada where many Michigan citizens are employed.

The school had an enrollment of 4,700 K-12 grade and offers programs in agricultural education, business education, home economics and industrial education. A staff evaluation committee of 15 members was used in planning and conducting activities, in addition to a general citizens' committee meeting jointly on one or more occasions. Staff discussions were held, which led to a reportedly greater degree of agreement in philosophy and objectives of vocational education. Part of the staff committee participated in a three-school evaluation conference.

An instrument was developed which was aimed at measurement of student, pupil, and staff attitude toward the world of work, and toward vocational education programs at the secondary level. The instrument was administered late in the school year. This study had not yet been summarized at the time of preparation of this final report on the project.

Waterford Township

Waterford Township Schools is one of two school systems serving the area west of Pontiac, a city of 82,223. Pontiac is Northeast of the Detroit Metropolitan area. The Waterford Township School system served a K-12 enrollment of 16,755. The vocational education offering includes business and distributive education, home economics, health occupations education, industrial education, and cooperative education.

Several meetings of school administrators and vocational teachers were held, but no formal staff committee was organized. Administrators and staff members were informed of evaluation events by means of a "World of Work Newsletter," by many informed contacts, and by various staff meetings.

Citizens were not involved in the evaluation effort during the project year, although they had been previously involved in program planning activities.

Consultants from the state colleges and universities, the state department of education, and business and industry were utilized.

A credit workshop on evaluation of vocational education served as the core of the school's efforts toward evaluation of its vocational education program. A summary of this workshop appears elsewhere in this report.

APPENDIX E

THE ROLE OF THE CONSULTANT IN EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS

A Project Staff Study

The research reported herein was
performed pursuant to a contract
with the Office of Education, U.S.
Department of Health, Education,
and Welfare, Grant No. O.E.G.-0-
070968-2829.

Evaluation Systems for Local
Programs of Vocational-Technical Education

March 1968

Research and Development Program
in Vocational-Technical Education
Department of Secondary Education and Curriculum
Michigan State University
East Lansing

THE ROLE OF THE CONSULTANT IN EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS

Summary of the Study

Two questionnaire forms were developed to ascertain the role of the vocational education evaluation consultant. Form I was designed for university vocational teacher educators and state consultants of vocational education. Form II was responded to by local project leaders and research associates from the schools participating in the Michigan Vocational Education Evaluation Systems Project. The conclusions that follow are drawn from the sampled consultants and consulters and may not necessarily be representative of all consultants and consulters. Of the 49 questionnaires distributed to the consultants 31 were returned, for an 83 percent return. Twenty of the 22 consulters receiving questionnaires returned the instrument, for a 91 percent return.

Analysis of the data led to the following conclusions in regard to the five questions for which the study sought information.

1. What is a consultant?

   There was agreement between consultants and consulters on the concept that a consultant on vocational education evaluation is primarily a resource person. While the consultant as an expert was held second in importance by consultants themselves, this was somewhat subordinated by consulters to the concept of the consultant as a process person.

   Over one-half of the consultants responding to the questionnaire had spent less than 20 percent of their time working as consultants. About 20 percent, however, had spent 80 to 100 percent of their time serving in a consultative role.

   Consultants had spent most of their time with administrators, with teachers following closely in second place. The least amount of time had been spent with other consultants and advisory committees but with local groups receiving somewhat more time.

   By far the greatest number of the responding consultants have been spending most of their time at the local level. In order of fairly consistently decreasing importance are the state, regional, and national levels.

The planning stage is when most consultants' services have been used. Of less importance are the evaluating, implementing, and innovating stages.

The consultants have spent most of their consulting time in the capacity of furnishing material and resources. The least amount of time has been spent as an expert on evaluation. Of less importance is assisting persons in solving their professional problems.

2. Is there a difference in the way the consultant and consulter perceive the role of the consultant in vocational education evaluation?

   The rank difference coefficient of correlation between consultant and consulter was relatively high for all areas of the study questionnaire. Highest agreement, .904, was related to the work of the consultant in evaluation and the lowest, .692, in regard to the consultant's abilities and characteristics. The degree of agreement on the consultant's traits and the consultant's activities was 825 and .832, respectively.

3. What abilities and characteristics should the consultant possess?

   The responding consultants and consulters felt the abilities and characteristics of the consultant should be oriented toward planning, assisting, and recommending rather than making decisions or making and presenting judgments to and for the group.

   Regarded as most important were the abilities to plan, to convey clear thinking, to maintain a close working relationship with group leaders or directors, and to keep up to date on materials.

   The most important characteristics were to be able to maintain rapport within the group, to be democratic, able to accept people, and to grasp the scope of a situation.

4. What activities can the consultant perform to stimulate evaluation?

   The consultants and consulters generally agreed on the consultant's activities in vocational education evaluation. Generally these activities involved the areas of planning, suggesting, recommending, listening, criticizing, stimulating, organizing, clarifying, and synthesizing.

   The most frequent activities reported by consultants and consulters were collecting and recommending resources for use by people involved and listening to problems and plans of groups of individual participants.

5. What guidelines may be used to direct the consultant in his work?

The consultant should

- --diligently prepare himself and furnish resource materials for the consulters
- --have a broad background of experience in his field before serving as a consultant
- --personally visit the area and the people connected with the problem or situation
- --be dynamic, practical, democratic, sympathetic, and a good organizer
- --assist the group to arrive at a solution to their problem by offering a variety of the best possible solutions to the problem
- --assist in setting goals
- --assist in interpretation of information
- --keep the group informed
- --help the group move toward making a decision
- --evaluate group goals, processes, and decisions

Background of the Study

Experience of the staff associated with the Evaluation Systems Project for Local Programs of Vocational-Technical Education resulted in increased interest in attempting to determine the role of the consultant. This interest resulted in part from the experience of the project personnel in the performance of consultative activities for the local schools associated with the project. The local schools were also using consultants from other sources, especially those with the Michigan State Department of Education. Most of the study was conducted by a project research assistant with the cooperation and assistance of the project director and other project research assistants.

Problem

At times vocational education evalution consultants may not be utilized effectively because they, or the people who use their services, do not have a clear concept of their role. This lack of knowledge concerning the role of the consultant may result in a less capable performance than possible if the consultant and consulter were to better understand the situation. The problem, then, becomes one of determining the role of the consultant in vocational education evaluation. This study attempted to answer the following questions:

1. What is a consultant?
2. Is there a difference in the way the consultant and consulter perceive the role of the consultant in vocational education evaluation?
3. What abilities and characteristics should the consultant possess?
4. What activities can the consultant perform to stimulate evaluation?
5. What guidelines may be used to direct the consultant in his work?

A consultant was defined as a person outside the school staff and its clientele that might be affected directly by decisions; who has had experience and/or education that qualify him to give advice, information, interpretations and/or suggestions regarding alternative courses of action or procedures, and/or who has skill in helping professional people to identify and work through their problems to a satisfactory solution.

Consultant types were recognized as those identified by Savage.[1] These include the "expert," the "resource person," and the "consulter"--one who utilizes the services of the consultant.

Procedures

Development of Checklist

To determine how the consultant and the consulter view the role of the consultant on evaluation in vocational education, two questionnaires were developed.[2] Questionnaire Form I was developed to determine how consultants viewed their role and Form II was utilized to determine how consulters viewed the role of the consultant. Items for the questionnaires were developed after conducting a search of the literature on the role of the consultant The questionnaires were then reviewed by the project director and research assistants. The questionnaires were revised and submitted to a jury of experts (Michigan teacher educators and consultants in vocational education). Using their suggestions, further revision was made and the forms were resubmitted to the same jury. After further revision the forms were submitted to and approved by the U.S. Office of Education.

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[1] From William W. Savage, Consultative Services to Local School Systems, (Chicago, Illinois: Midwest Administration Center, 1959).

The Populations

The population used for Form I included 31 vocational educators in Michigan universities and consultants in the Michigan State Department of Education. Seventeen of the returns came from vocational educators at Michigan State University, Wayne State University, Central Michigan University, Western Michigan University, Eastern Michigan University, and Northern Michigan University The consultants from the Michigan Department of Education were all employed in the Vocational Education Division.

Design

The study was conducted by a mailed questionnaire. The major portion of the questionnaire was designed so that the respondent could easily check one of several responses to an item or check a response indicating his agreement or lack of agreement, the importance of the item, or the frequency with which the item should be done.

The following steps constitute the general design of the study.

1. A review of literature to determine items for the questionnaires.
2. Utilize the Evaluation Systems Project Staff in an advisory capacity in developing the questionnaires
3. Have a jury of experts review the questionnaires.
4. Utilize local project leaders and research associates connected with the Evaluation Systems Project and vocational educators in Michigan Universities and the Michigan State Department of Education to respond to the questionnaire.

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[2] The plan for the study and instruments were developed by Joan Quilling, who also gathered the data and made a preliminary analysis. The analysis was completed and the report prepared by Floyd McKinney. Both were research assistants on the project under the supervision of Harold M. Byram, project leader.

Analysis

Thirty-one individuals responded to Form I of the questionnaire. Assuming the respondents would equally divide their choices, the items with three-response choices would have about ten responses per choice, and the items with four-response choices would have about eight responses per choice. If a rating of 2-1-0 is assigned to the items with three-response choices and a rating of 3-2-1-0 to the items with four-response choices the total score for such items would then be 30 and 48 respectively. For an item to be rejected it was necessary for its total score to be less than 30 for a three-response choice item, and less than 48 for a four-response choice item.

Twenty individuals responded to Form II of the questionnaire. The same procedure as described for Form I was used to determine the level of rejection for Form II. For an item to be rejected it was necessary for its total score to be less than 21 for a three-response choice item and less than 30 for a four-response choice item.

APPENDIX A

Summary of the Results for Questionnaire Form I -- Consultants

1. A consultant's work on evaluation, as viewed by consultants

Number Selecting Each Choice

Question	Agree No.	Agree Score	Partially Agree No.	Partially Agree Score	Disagree No.	Disagree Score	No Answer No.
1. He should give answers to problems which arise if he has the answer.	13	26	14	14	2	0	2
2. He should provide resource materials.	26	52	4	4	1	0	0
3. He should attempt to give no concrete answers to problems, only suggestions.	6	6	15	30	10	0	0
4. If a consultant sees a solution to a problem, he should volunteer the answer.	9	18	19	19	3	0	0
5. A consultant should offer a variety of problem solutions and allow a choice of answers.	21	42	9	9	0	0	1
6. A consultant should be concerned with a group's interactions and its reactions to a situation.	25	50	6	6	0	0	0
7. A consultant should help the group arrive at a definite answer to a problem.	12	24	17	17	2	0	0
8. A consultant should not give suggestions towards answers he feels are best for the group.*	1	1	8	16	22	0	0
9. A consultant should be highly skilled in human relations.	27	54	4	4	0	0	0
10. A consultant should have a broad background of experience before acting as a consultant.	22	44	9	9	0	0	0

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* Not accepted

2. Consultant abilities and characteristics consultants think they should possess

	Number Selecting Each Choice							
	Always Important (Essential)		Usually Important (Desirable)		Sometimes Important (Acceptable)		Not Important (Undesirable)	
Abilities	No.	Score	No.	Score	No.	Score	No.	Score
1. To plan	21	63	10	20	0	0	0	0
2. To be able to convey clear thinking to others	28	84	3	6	0	0	0	0
3. To give solutions to problems*	1	3	16	32	11	11	3	0
4. To chair the group consulting him	13	39	14	28	4	4	0	0
5. To interpret information	15	45	15	30	1	1	0	0
6. To make decisions for the group*	0	0	1	2	11	11	19	0
7. To assist in setting group goals	12	36	14	28	5	5	0	0
8. To be quick and to the point on matters in order to keep the group moving	8	24	10	20	12	12	1	0
9. To help groups and individuals move toward decision making	15	45	13	26	3	3	0	0
10. To make and present judgments or evaluations to and for the group *	6	18	6	12	15	15	4	0
11. To evaluate group or individual goals and purposes	7	21	14	28	10	10	0	0
12. To recommend ways that the group can solve its problems	12	36	15	30	4	4	0	0
13. To maintain a close working relationship with group leaders or directors	23	69	7	14	1	1	0	0
14. To keep people informed of what happens	18	54	10	20	3	3	0	0
15. To keep up to date on materials	25	75	6	12	0	0	0	0
Characteristics								
1. Be dynamic and cause things to happen	6	18	19	38	6	6	0	0
2. Be a good public relations representative	18	54	11	22	2	2	0	0
3. Be able to determine the interests and creativeness of personnel	15	45	11	22	5	5	0	0
4. Be practical	17	51	12	24	2	2	0	0
5. Be able to maintain rapport within the group	23	69	8	16	0	0	0	0
6. Be democratic	20	60	11	22	0	0	0	0
7. Be sympathetic	12	36	15	30	4	4	0	0
8. Have expertise relative to subject matter	18	54	13	26	0	0	0	0
9. Be able to accept people	22	66	9	18	0	0	0	0
10. Be able to grasp the scope of a situation	22	66	9	18	0	0	0	0

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*Not accepted

3. Frequency of activities, reported by consultants

Activities	Number Selecting Each Choice Often No.	 Score	 Sometimes No.	 Score	 Practically Never No.	 Score
1. Make visits to the area where the problem developed	13	26	17	17	1	0
2. Help in the pre-planning and setting up of problems or plans	15	30	14	14	2	0
3. Conduct or assist in evaluation of programs or plans	11	22	18	18	2	0
4. Ask for an evaluation of your own consultant service*	4	8	13	13	14	0
5. Give suggestions when requested	21	42	10	10	0	0
6. Help to keep projects or plans moving toward their objectives	20	40	10	10	1	0
7. Collect and recommend resources for use by people involved	24	48	7	7	0	0
8. Listen to problems and plans of group or individual participants	24	48	7	7	0	0
9. Criticize plans or procedures	5	10	23	23	3	0
10. Analyze and interpret the data or information involved	13	16	17	17	1	0
11. Stimulate thinking on problems and plans	20	40	11	11	0	0
12. Help organize planning groups	8	16	19	19	4	0
13. Help organize plans of action	13	26	17	17	1	0
14. Demonstrate an idea for clarification	8	16	18	18	5	0
15. Help to decrease friction within groups or among individuals	7	14	17	17	7	0
16. Participate in group discussions	23	46	8	8	0	0
17. Help clarify group or individual thinking	16	32	15	15	0	0
18. Sythesize material in order to make recommendations (pull things together)	12	24	19	19	0	0
19. Interpret the developments within a meeting to all members involved	12	24	17	17	2	0
20. Prepare for visits before seeing people involved	19	38	10	10	2	0

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* Not accepted

Appendix B

Summary of the Results for Questionnaire Form II -- Consulters

1. A consultant's work on evaluation as viewed by consulters

Question	Agree		Partially Agree		Disagree	
	No.	Score	No.	Score	No.	Score
1. He should give answers to problems which arise if he has the answers	14	28	5	5	1	0
2. He should provide resource material	18	36	1	1	1	0
3. He should attempt to give no concrete answers to problems, only suggestions	6	12	11	11	3	0
4. If a consultant sees a solution to a problem, he should volunteer the answer	9	18	8	8	3	0
5. A consultant should attempt to offer a variety of problem solutions from which a choice may be made	13	26	5	5	2	0
6. A consultant should be concerned with a group's interactions and with an individual or group's reactions to a situation	19	38	1	1	0	0
7. A consultant should help the group or individual arrive at a definite answer to a problem	11	22	9	9	0	0
8. The consultant should not give suggestions towards answers he feels are best for the group or individual*	1	2	1	1	18	0
9. A consultant should be highly skilled in human relations	15	30	5	5	0	0
10. A consultant should have a broad background of experience in his field before serving as a consultant	17	34	3	3	0	0

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*Not accepted

2. Consultant abilities and characteristics desired by consulters

	Number Selecting Each Choice							
	Always Important (Essential)		Usually Important (Desirable)		Sometimes Important (Acceptable)		Not Important (Undesirable)	
Abilities	No.	Score	No.	Score	No.	Score	No.	Score
1. To plan	15	45	3	6	2	2	0	0
2. To be able to convey clear thinking to others	18	54	2	4	0	0	0	0
3. To analyze problems and/or programs	13	39	7	14	0	0	0	0
4. To give solutions to problems	2	6	11	22	6	6	1	0
5. To chair the group consulting him*	1	3	7	14	4	4	8	0
6. To interpret information	13	39	7	14	0	0	0	0
7. To make decisions for the group	0	0	1	2	7	7	12	0
8. To assist in setting group goals	5	15	8	16	6	6	1	0
9. To be quick and to the point on matters in order to keep the group moving*	2	6	4	8	10	10	0	0
10. To help groups and individuals move toward decision making	9	27	6	12	5	5	0	0
11. To make and present judgments or evaluations to and/or for the group*	1	3	4	8	9	9	6	0
12. To evaluate group or individual goals and purposes	4	12	7	14	8	8	1	0
13. To recommend ways that the group can solve its problems	4	12	11	22	4	4	1	0
14. To maintain a close working relationship with group leaders or directors	15	45	4	6	2	2	0	0
15. To keep up-to-date on materials in his field	18	54	2	4	0	0	0	0
16. To keep people with whom he works informed on what happens	14	42	2	4	4	4	0	0
Characteristics								
1. Be dynamic and cause things to happen	5	15	10	20	5	5	0	0
2. Be a good public relations representative	6	18	14	28	0	0	0	0
3. Be able to determine the interests and creativeness of personnel	9	27	6	12	5	5	0	0
4. Be practical	14	42	5	10	1	1	0	0
5. Be able to maintain rapport within the group	12	36	4	8	4	4	0	0
6. Be democratic	9	27	7	14	4	4	0	0
7. Be sympathetic	4	12	10	20	6	6	0	0
8. Have expertise relative to his subject matter	10	30	8	16	2	2	0	0
9. Be able to accept people	14	42	6	12	0	0	0	0

3. Frequency of activities of the consultant as viewed by the consulter.

	Number Selecting Each Choice						
	Often		Sometimes		Practically Never		No answer
Activities	No.	Score	No.	Score	No.	Score	No.
1. Make visits to the area where the problem developed	8	16	12	12	0	0	0
2. Help in the pre-planning and setting up of programs or plans	11	22	9	9	0	0	0
3. Conduct or assist in evaluation of programs or plans	9	18	10	10	1	0	0
4. Ask for an evaluation of his own consultant service*	3	6	12	12	5	0	0
5. Give suggestions when requested	14	28	6	6	0	0	0
6. Help to keep projects or plans moving toward their objectives	15	30	5	5	0	0	0
7. Collect and recommend resources for use by people being served	16	32	4	4	0	0	0
8. Listen to problems and plans of group or individual participants	16	32	4	4	0	0	0
9. Criticize plans or procedures*	2	4	17	17	1	0	0
10. Analyze and interpret the data or information involved	9	18	9	9	1	0	0
11. Stimulate thinking on problems and plans	11	22	8	8	0	0	0
12. Help organize planning groups	5	10	12	12	3	0	0
13. Help organize plans of action	4	8	15	15	1	0	0
14. Demonstrate an idea for clarification	4	8	14	14	1	0	1
15. Help to decrease friction within groups or among individuals	4	8	14	14	2	0	0
16. Participate in group discussions	5	10	14	14	0	0	0
17. Help clarify group or individual thinking	12	24	8	8	0	0	0
18. Synthesize materials in order to make recommendations (pull things together)	7	14	12	12	0	0	1
19. Interpret the developments within a meeting to all members involved	4	8	15	15	1	0	0
20. Prepare for visits before seeing the people involved	14	28	5	5	0	0	1

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* Not Accepted

APPENDIX F

RESEARCH & DEVELOPMENT PROGRAM
In Vocational-Technical Education

AN EXAMPLE OF THE USE OF A VOCATIONAL EDUCATION INFORMATION INVENTORY

A Project Staff Study

The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare, Grant No. O.E.G. -0-070968-2829.

Evaluation Systems for Local
Programs of Vocational-Technical Education

May 1968

Research and Development Program
in Vocational-Technical Education
Department of Secondary Education and Curriculum
Michigan State University
East Lansing

AN EXAMPLE OF THE USE OF A VOCATIONAL EDUCATION INFORMATION INVENTORY

By

Floyd McKinney*

Summary

A sixty-item instrument was designed with the original purpose of measuring change which might occur as a result of the Evaluation Systems Project having been in operation in a local school system Due to delays in the development of the instrument this measurement of change was not possible. However, the instrument was provided to school systems participating in the project, with the suggestion that it might be used to measure the agreement or lack of agreement concerning the understanding of vocational education between certain groups in their school systems The data presented in this report represent the results of the trial in one school in the use of the Vocational Education Information Inventory.

Returns were received from 104 teachers of vocational education and 18 administrators in the system A t-test was computed for each item to determine if there were significant differences between administrators and teachers Items were considered significant at the .05 level of significance. The administrators and teachers agreed with the panel of judges on all items, although the extent of agreement varied from item to item.

Fifteen of the items were found to show a significant difference in the understanding or attitude of teachers as compared to administrators The administrators had a lower average score on all of these 15 items than the teachers. The items showing a significant difference at the .05 level are as follows:

4 Vocational education programs tend to result in higher national per capita incomes.

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* Research Assistant R & D Unit, Evaluation Systems Project, M.S.U.

5. Vocational education increases the employment rate of workers

*15. Cooperative work experience programs contribute little to the effectiveness of vocational education programs.

17. Vocational education should emphasize the development of abilities that can be used for many years.

*18. The schools need not accept the responsibility of teaching students how to write a letter of application for a job.

19. Vocational education should prepare its clientele for useful employment.

24. Manpower needs can be partially met through vocational education.

*30. Employer and employee organizations should not expect to be invited to cooperate with the school in planning its vocational education programs

31. Mechanization increases the need for specialized training.

33. Manpower needs of the community should be considered in determining the type of vocational education programs to offer

*36. Simulated experiences are as successful as on-the-job occupational experiences in training for employment.

38. A guidance program should include effective follow-up services.

49. Many women need vocational education experiences to vitalize their old skills and to learn new skills.

*56 If a person is properly trained he can do well in any occupation.

59. People should be satisfied with, and be making progress in their jobs as a result of their vocational education experiences.

Background

As the Evaluation Systems Project progressed through its various stages it became evident that some attempt should be made to measure the change which might occur among teachers and administrators at the local school level as a result of the project having been in operation within the school system. One of the evaluative techniques developed for this purpose was a "Vocational Education Information Inventory." The Inventory was developed after the project was well under way in local schools, thus no measurement of the individuals could take place prior to the initiation of the project. The data presented in this report are from one school system that used the Inventory close to the end of the project year. This report is made in an effort to show how the data secured from the Inventory might be used by a

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* The panel of judges disagreed with these items.

a local school system and/or researchers wishing to measure change on the part of certain project participants and those directly or indirectly affected by a project

Problem

The prospect of additional financial assistance, and the status associated with a state or nationally recognized research project are sources of motivation for many school systems. The appeal to some is also a realization of the need for change, or redirection of programs. The question that is extremely difficult to answer is the extent of change which results from participation in a research project by a local school system.

One of the more important changes which might be brought about by a project such as this, is a change in the understandings (or attitudes) of those individuals teaching and administering the local program of vocational education. This study was an attempt to measure if such a change had taken place.

Procedures

Development of Instrument. Items for the Vocational Education Inventory were developed by a project research assistant.[1] The items were derived from a review of literature and the experiences of the project personnel. Following several reviews of the instrument by the project director and research assistants the Inventory was submitted to a panel of vocational teacher educators and consultants. A panel of 19 judges gave suggestions for the improvement and addition or deletion of certain items.

The members of the panel of judges also marked their choices for each item according to the following scale:

SA Strongly Agree or Accept
A Agree or Accept
U Undecided
D Disagree
SD Strongly Disagree

One of the schools participating in the project used the instrument in conjunction with a vocational education evaluation credit workshop which was part of their local evaluation effort. The results of this trial run of the instrument were most helpful in identifying questionable items. The revised instrument was then submitted to the U.S. Office of Education for approval.

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[1] Floyd McKinney, with advice from Harold M. Byram, Project Leader

The instrument itself was arranged so that it could be answered on a mechanically scored answer sheet. From these sheets computer cards could be automatically produced for data analyzation and for ease of storage.

Population. When the idea of an instrument to measure change in the understandings and information of project participants was first conceived it was hoped that all of the local schools connected with the Project would make use of the instrument. Delays in getting the instrument to these schools resulted in scattered usage, but the experience of one school and an analyzation of the data herein does provide an example which can be utilized in future studies. Project personnel had hoped the population would include all vocational education personnel, administrators, and in some cases perhaps all teachers in a local school system.

Design. These steps were followed in conducting the study:

a) A review of literature was made to secure appropriate items for instrument.
b) The instrument was critiqued by the project leader and research assistants.
c) A trial-run of the instrument was made at one of the participating schools.
d) A panel of judges was selected to review and rate the items.
e) Approval of the instrument was secured from the U.S. Office of Education.
f) Local schools were given the option of using the instrument. Most of the project schools requested copies.
g) Answer sheets were obtained from one school so that the data could be presented and analyzed.

Analysis. For those items on the instrument with which the panel of judges agreed, the following scores were assigned: SA=5, A=4, U=3, D=2, and SD=1. For those items with which the majority of the judges disagreed, scale scores were reversed to provide comparable responses for computation purposes. An average score was then secured for each item as marked by the teachers and administrators.

Significance of differences between teachers and administrators was determined by use of the t-test. Items were considered significant at the .05 level. The formula used in computing the t-test for differences between uncorrelated means was:

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\Sigma x_1^2 + \Sigma x_2^2}{N_1 + N_2 - 2}\right)\left(\frac{N_1 + N_2}{N_1 N_2}\right)}}$$

Where M_1 and M_2 = means of the two samples

Σx_1^2, and Σx_2^2 = sums of squares in the two samples

N_1 and N_2 = numbers of cases in the two samples

APPENDIX A

Comparison of Teacher-Administrator Viewpoint Toward Items on the Vocational Education Information Inventory

Number of Responses(1) per Item

	SA	A	U	D	SD	(2) Average Score	t-test (3)
1	6	37	17	35	9	3.03	
*1	0	7	3	7	1	3.11	
4	30	38	27	7	2	3.97	2.21
*4	2	5	10	1	0	3.44	
5	48	46	5	5	0	4.31	2.18
*5	6	7	3	0	2	3.83	
6	3	0	2	22	77	4.65	
*6	0	0	0	3	15	4.83	
7	6	7	2	44	45	4.10	
*7	1	1	1	7	8	4.11	
8	4	4	4	42	50	4.25	
*8	0	2	0	8	8	4.22	
9	34	39	12	15	4	3.80	
*9	7	5	2	3	1	3.77	
10	6	7	5	27	59	4.21	
*10	1	2	0	5	10	4.16	
11	18	57	21	8	0	3.81	
*11	1	10	7	0	0	3.66	
12	0	5	3	33	63	4.48	
*12	1	1	0	9	7	4.11	
13	15	54	12	17	6	3.52	
*13	3	7	4	3	1	3.44	
14	14	21	30	24	15	3.04	
*14	1	5	8	2	2	2.94	
15	1	2	8	33	60	4.43	2.02
*15	2	1	1	7	7	3.33	
16	74	23	6	1	0	4.63	
*16	10	7	0	0	1	4.38	
17	51	42	6	3	3	4.32	2.50
*17	7	4	3	4	0	3.77	
18	1	0	0	26	77	4.71	2.10
*18	0	2	0	5	11	4.38	

Number of Responses(1) per Item

	SA	A	U	D	SD	(2) Average Score	t-test (3)
19	78	26	0	0	0	4.75	3.00
*19	10	6	1	0	1	4.33	
20	73	31	0	0	0	4.70	
*20	11	7	0	0	0	4.61	
21	3	41	18	28	14	4.21	
*21	0	6	6	5	1	2.94	
22	8	31	25	33	7	3.00	
*22	1	2	8	4	3	3.33	
23	79	22	2	0	1	4.71	
*23	12	6	0	0	0	4.66	
24	60	37	6	1	0	4.50	2.33
*24	4	13	0	1	0	4.11	
25	28	33	21	20	2	3.62	
*25	5	5	4	3	1	3.77	
26	55	43	2	1	3	4.41	
*26	6	9	1	2	0	4.05	
27	76	24	1	2	1	4.65	
*27	14	3	0	0	1	4.61	
28	4	3	5	46	46	4.22	
*28	1	1	2	9	5	3.88	
30	0	0	2	33	69	4.64	2.66
*30	2	1	0	4	11	4.16	
31	66	36	0	1	1	4.58	3.01
*31	5	11	0	2	0	4.05	
32	0	2	10	34	58	4.42	
*32	1	0	1	7	9	4.27	
33	52	46	3	1	2	4.39	2.57
*33	5	10	1	1	1	3.94	
34	4	6	5	39	50	4.21	
*34	0	2	0	9	7	4.16	
35	18	33	20	23	10	3.25	
*35	0	7	4	7	0	3.00	
36	2	18	18	51	15	3.75	2.26
*36	2	3	5	6	2	3.16	
37	55	38	8	2	1	4.38	
*37	9	7	0	0	2	4.17	
38	70	30	4	0	0	4.63	2.93
*38	10	7	0	0	1	4.16	

Number of Responses(1) per Item

	SA	A	U	D	SD	(2) Average Score	t-test (3)
39	28	33	4	21	18	3.31	
*39	3	6	4	4	1	3.33	
40	62	34	7	1	0	4.52	
*40	11	6	0	1	0	4.50	
41	1	4	6	46	47	4.28	
*41	0	2	1	10	5	4.00	
43	41	51	7	3	2	4.22	
*43	2	14	1	1	0	3.94	
44	2	13	23	41	25	3.71	
*44	0	1	5	10	2	3.72	
45	42	46	10	4	1	4.16	
*45	6	10	2	0	0	4.22	
46	36	50	15	3	0	4.14	
*46	5	11	1	1	0	4.11	
47	90	13	1	0	0	4.85	
*47	13	5	0	0	0	4.72	
48	54	36	7	7	0	4.31	
*48	7	9	1	1	0	4.22	
49	52	43	5	4	0	4.37	2.26
*49	4	10	3	1	0	3.94	
50	9	24	21	40	10	3.17	
*50	0	6	2	10	0	3.22	
51	1	4	3	20	76	4.59	
*51	2	0	1	5	10	4.16	
52	2	14	30	39	19	3.56	
*52	0	5	6	6	1	3.16	
53	13	31	18	30	12	3.02	
*53	1	6	3	7	1	2.94	
54	57	34	5	7	1	4.33	
*54	7	10	1	0	0	4.33	
55	19	46	26	10	3	3.65	
*55	1	8	6	2	1	3.33	
56	5	20	14	39	26	3.58	2.00
*56	0	3	4	9	2	3.00	
57	4	27	21	37	15	3.31	
*57	1	4	6	7	0	3.05	
58	5	14	12	56	17	3.63	
*58	0	1	6	10	1	3.61	

Number of Responses(1) per Item

	SA	A	U	D	SD	(2) Average Score	t-test (3)
59	17	58	14	10	5	4.65	3.67
*59	1	12	4	1	0	3.72	
60	20	42	17	23	2	2.47	
*60	2	9	5	2	0	2.38	

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* Numbers with asterisk represent administrators,
Numbers without asterisk represent teachers.

(1) Scale:

SA = Strongly Agree or Accept
A = Agree or Accept
U = Undecided
D = Disagree
SD = Strongly Disagree

(2) Average Score Bases:

SA = 5, A = 4, U = 3, D = 2, SD = 1

For those items of the inventory with which the majority of the judges disagreed, scale scores were reversed to provide comparable responses for computation purposes.

(3) Computed for the .05 level of significance. Items with no t-test score listed did not reach the .05 level.

(4) Items 2, 3, 29, and 42 were deleted from the analysis because of lack of agreement among the panel of judges as to the most appropriate response to the item.

APPENDIX B

RESEARCH AND DEVELOPMENT PROGRAM
IN VOCATIONAL-TECHNICAL EDUCATION

Michigan State University
College of Education

EVALUATION SYSTEMS PROJECT

VOCATIONAL EDUCATION INFORMATION INVENTORY

Directions: Be sure your name and sex is indicated on the response sheet. Carefully read each statement and mark your reaction on the response sheet. React to each statement by marking the category which most nearly corresponds to your own beliefs.

1 - I strongly agree with, or accept the statement

2 - I tend to agree with, or accept the statement

3 - I am undecided in regard to the statement

4 - I tend to disagree with, or reject the statement

5 - I strongly disagree with, or reject the statement

1. General education is the best preparation for work.
2. Vocational education should be confined to occupations in which the students can secure a job when they leave or graduate from school.
3. The best job training is that given prior to employment.
4. Vocational education programs tend to result in higher national per capita incomes.
5. Vocational education increases the employment rate of workers.
6. A course that helps students improve their personal and social living habits has no place in the vocational education curriculum.
7. Exploratory values to a student should not be expected in courses that are a part of a vocational education sequence.
8. Students at the high school level are too immature to make it worthwhile to provide the specialized courses to prepare them for specific occupations.
9. All people can be trained for a level of work commensurate with their level of abilities.

10. Vocational education is largely for those unable to be academically successful.

11. Many of the traditional areas in vocational education could combine certain of their basic courses so that basic principles and concepts could be taught in a class composed of students with occupational goals commonly thought of as representative of different vocational areas.

12. Vocational education should concern itself with only the development of skills.

13. An important function of vocational education is teaching people to work with their hands.

14. Occupational-cluster training (examples: Health Services, Electronics) should be given on the junior high school level.

15. Cooperative work experience programs contribute little to the effectiveness of vocational education programs.

16. Vocational education should include the preparation of students in the techniques of being interviewed.

17. Vocational education should emphasize the development of abilities that can be used for many years.

18. The school need not accept the responsibility of teaching students how to write a letter of application for a job.

19. Vocational education should prepare its clientele for useful employment.

20. Students should learn how to apply in person for a job as a result of their experiences in vocational education.

21. The vocational education student is generally one of lower socio-economic status.

22. Employers will provide training needed by most of their workers.

23. Learning is one of the goals of vocational education.

24. Manpower needs can be partially met through vocational education.

25. Youth should possess a marketable occupational skill when they leave high school.

26. Cooperative education programs provide good opportunities for youth to develop their vocational skills.

27. Educators need to be cognizant of the entrance requirements in the occupations for which they are educating persons.

28 The types of vocational courses offered in a school need not bear a relationship to the inflow and outflow of workers.

29. Vocational education should generally be related to employment opportunities in local areas.

30. Employer and employee organizations should not expect to be invited to cooperate with the school in planning its vocational education programs.

31 Mechanization increases the need for specialized training.

32 Persons in charge of vocational education need not feel any responsibility in the education of the handicapped.

33 Manpower needs of the community should be considered in determining the type of vocational education programs to offer

34. Specific skill training should not be offered in high school.

35. Junior high school students lack the maturity and experience to profit from specialized vocational courses.

36. Simulated experiences are as successful as on-the-job occupational experiences in training for employment.

37. Schools have a responsibility to provide occupational education for persons of all levels of ability

38. A guidance program should include effective follow-up services.

39. Vocational courses are as valuable as any other courses in the curriculum to prepare students to succeed as college or university students.

40. Information about student work experience should be a part of the records maintained by the guidance office.

41. Effective guidance can be provided without access to the information found in an occupational survey of the labor needs of the area.

42. Guidance is generally more necessary at the adolescent level than at the adult level.

43. School guidance programs should assist students in making a tentative occupational choice.

44 It is not a responsibility of the school to provide placement services. Student placement services are adequately provided by governmental agencies.

45. It is important to consider the nations balance between labor shortage and surplus when counseling students about occupations.

46. Optimum utilization of human resources is one measure of an effective guidance program.

47. Occupational information should be available to all students.

48. Vocational education for adults should include specific training for specific jobs.

49. Many women need vocational education experiences to vitalize their old skills and to learn new skills.

50. The upgrading of the skills of adults is more the responsibility of employers than of the educational system.

51. All vocational education should be conducted as a post-high school program.

52. Vocational education for all adults yields dividends to the community more slowly than similar instruction for youth in the secondary school.

53. The best time to teach job skills is when they are needed.

54. Educating persons for a vocation results in as great a return to society as educating persons for the professions.

55. As the amount of schooling an individual receives decreases, the need for specialization in his vocational preparation increases.

56. If a person is properly trained he can do well in any occupation.

57. The proportion of people who engage in an occupation in a field in which they were trained, is a poor measure of the training effectiveness of a program.

58. Educators should be more concerned with educating future workers than with on-the-job success of their former students.

59. People should be satisfied with, and be making progress in their jobs as a result of their vocational education experiences.

60. Students who enroll in vocational education courses at the secondary level are not as well prepared for college as those enrolled in a college preparatory curriculum.